

INFORMATION SYSTEM
ANNUAL PRESENTATION 1984

INPUT

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ISP
Presentation
1984

INFORMATION SYSTEMS DIRECTIONS, 1984

by
Peter A. Cunningham
President
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INFORMATION Systems
DIRECTIONS, 1984

UUCP
1984
I.C

AUTHOR

TITLE

DATE
LOANED

BORROWER'S NAME



INPUT PRESENTS:

**Preparing for the Age
of Individualized Systems**

INPUT



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PURPOSE

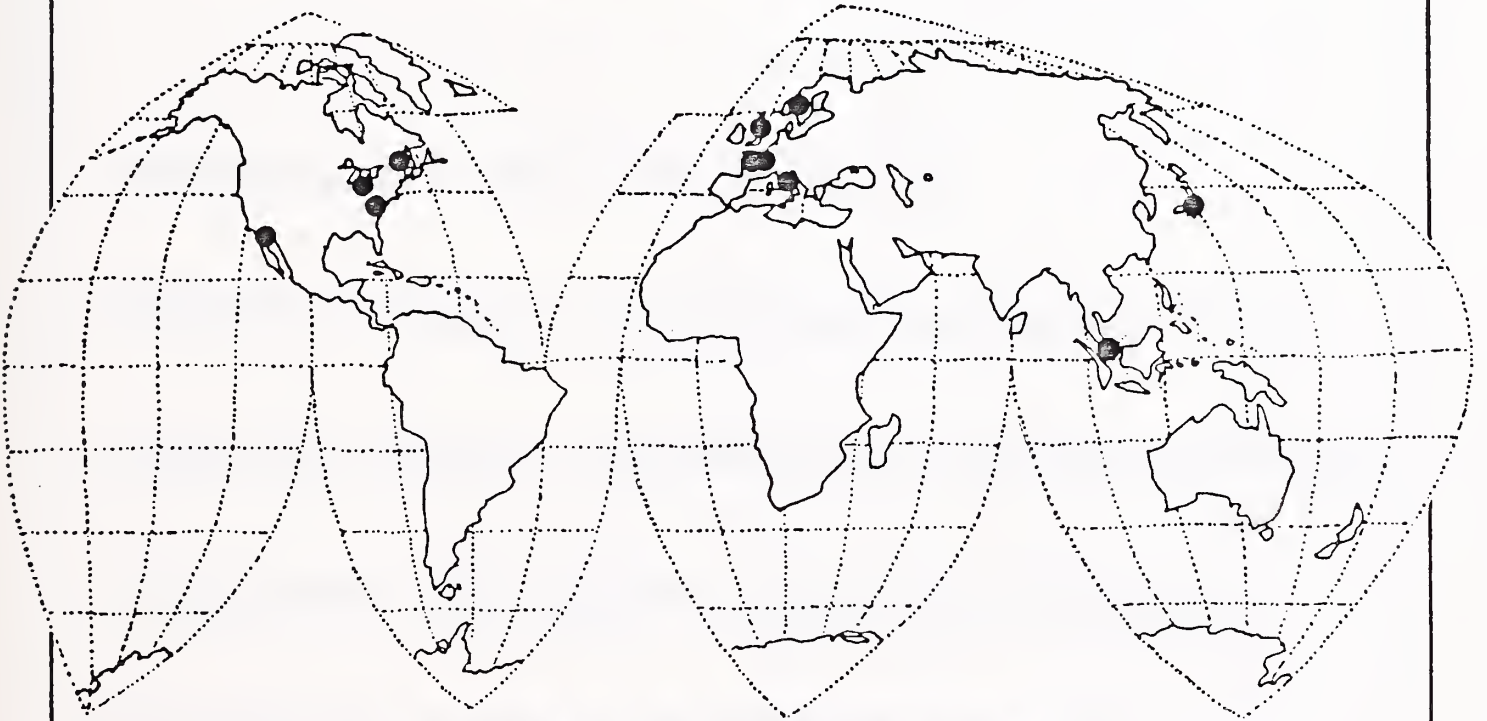
- **Identify Key IS Trends**
- **Relate Major INPUT Research Findings**
- **Recommend Corporate Computing Strategies**

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**INPUT Performs Thousands
of Vendor and User Interviews
Each Year**

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WORLDWIDE

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INPUT SUBSCRIPTION PROGRAMS

- **Information Systems Program**
- **Market Analysis and Planning Service/U.S.**
- **Market Analysis and Planning Service/Europe**
- **Customer Service Program/U.S., Europe**
- **Company Analysis and Monitoring Program**
- **Federal Information Systems and Services Program**

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**INFORMATION SYSTEMS
PROGRAMS, 1984
(ISP)**

Client Support Program

**End-User
Systems
Planning
Program**

**Software
Planning
Program**

**Corporate
Systems
Planning
Program**

**Telecom-
munications
Planning
Program**

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AGENDA

- **Driving Forces**
- **Management Issues**
- **Organizational Trends**
- **End-User Developments**
- **Central IS Issues**
- **Recommendations**

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AGE OF INDIVIDUALIZED SYSTEMS



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INFORMATION SYSTEMS AS WEAPONS

- **Reduction of Cost, Time**
- **Improvement of Accuracy, Effectiveness**
- **Products Themselves**

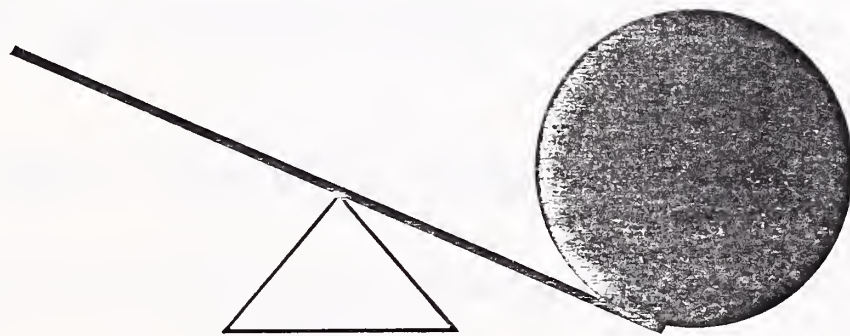
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MANAGERS DEMAND INDIVIDUALIZED SYSTEMS

- **Knowledge Based**
- **Focused**
- **Strategic**
- **Rapid Response**

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**Competitive Advantage Depends Upon
Systems That Deliver Customized,
Strategic Information**



INPUT

STRATEGIC TRENDS MUST BE RECOGNIZED

Mainframe Batch → Interactive Terminals → Minis → Micros

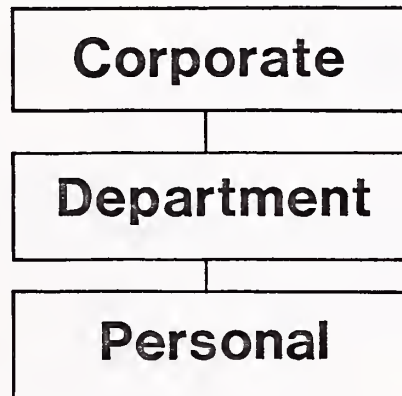
DP → MIS → DSS → Expert Systems

Data → Information → Knowledge

●————→
Time

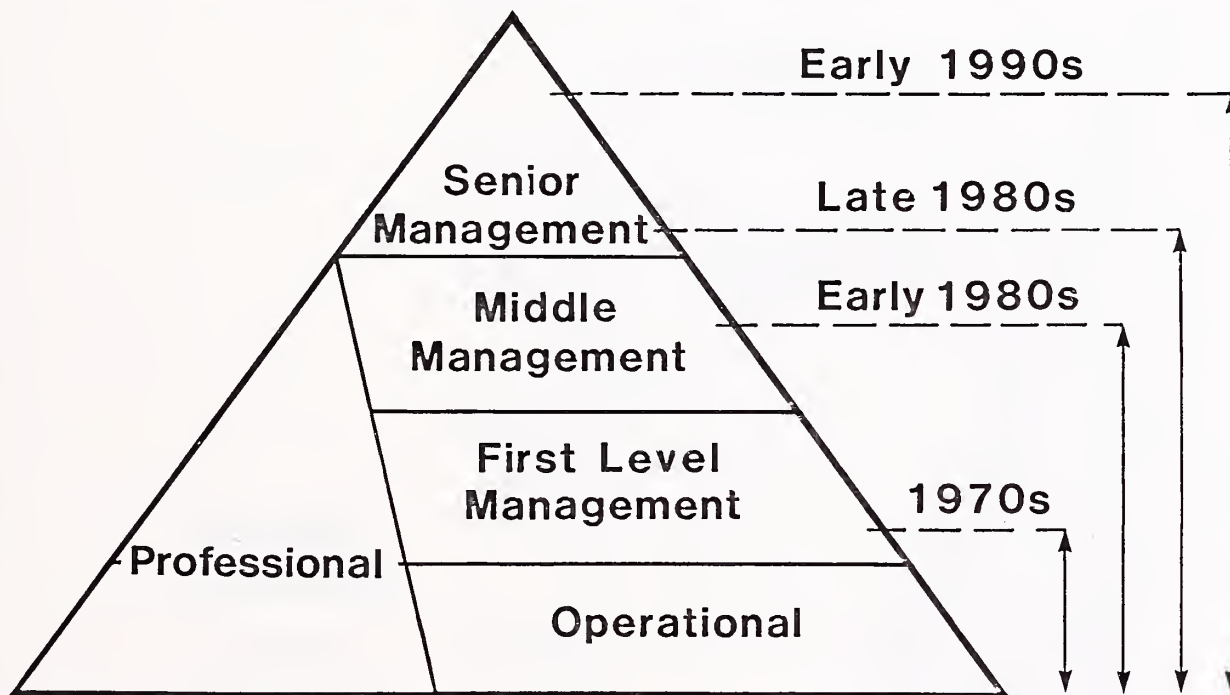
INPUT

THREE TIERS OF SYSTEM NEED



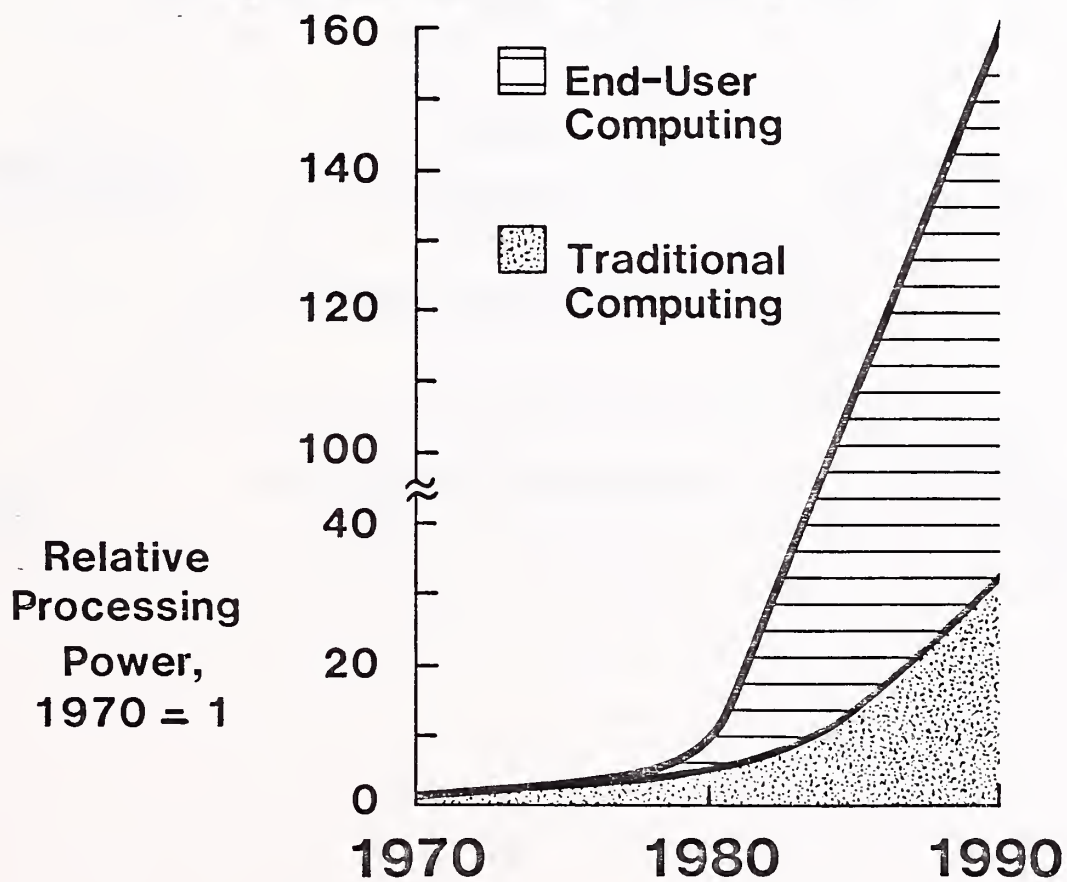
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EVOLUTION OF CORPORATE COMPUTERIZED DATA USE



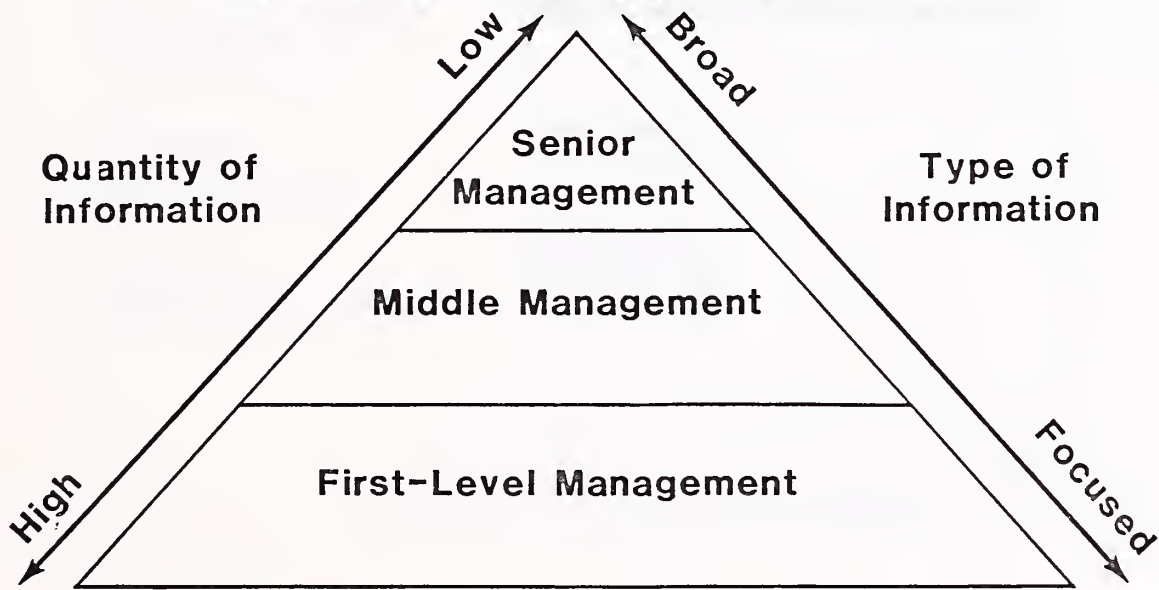
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EXPLOSIVE GROWTH IN END-USER COMPUTING



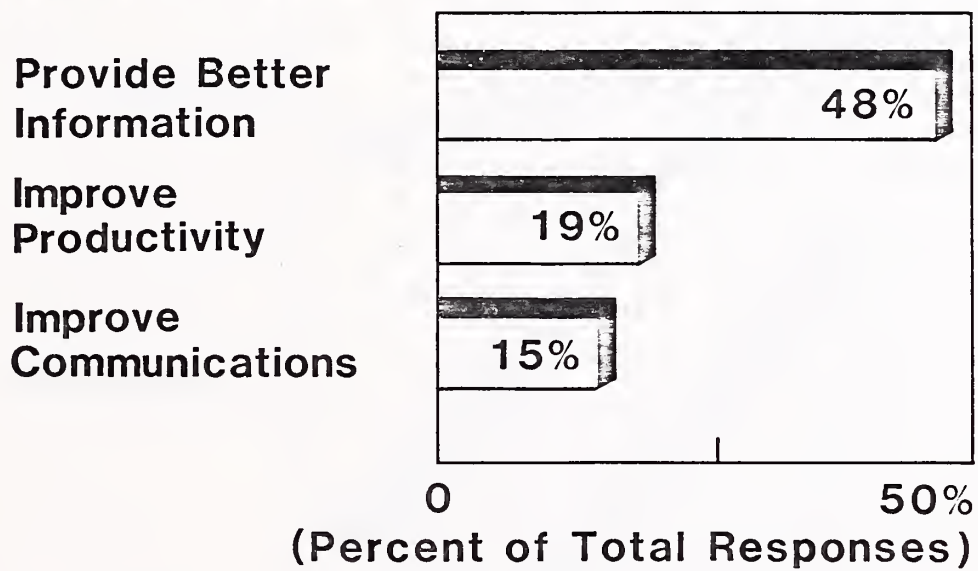
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INFORMATION NEEDS BY MANAGEMENT LEVELS



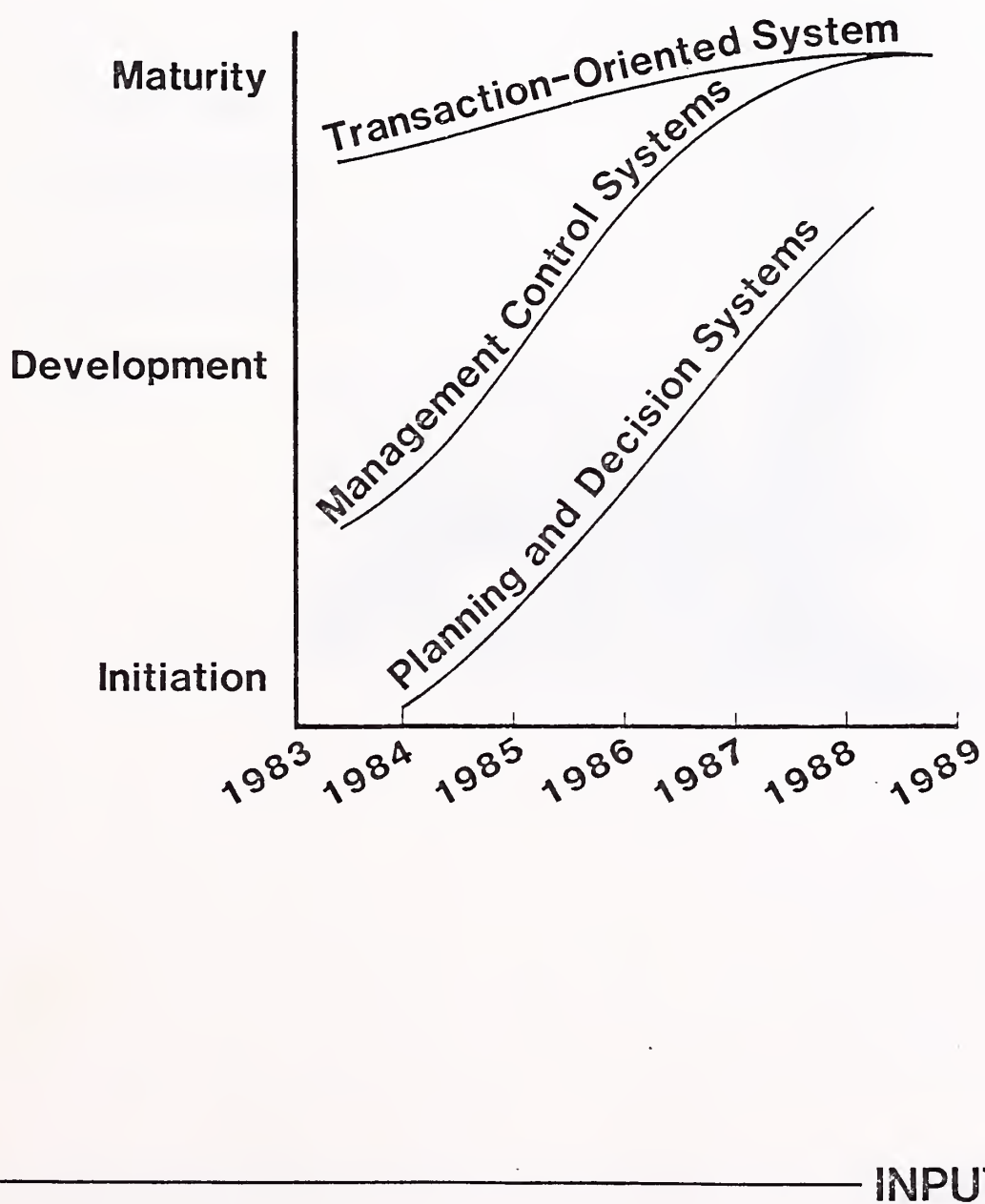
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MANAGEMENT SYSTEMS BENEFITS



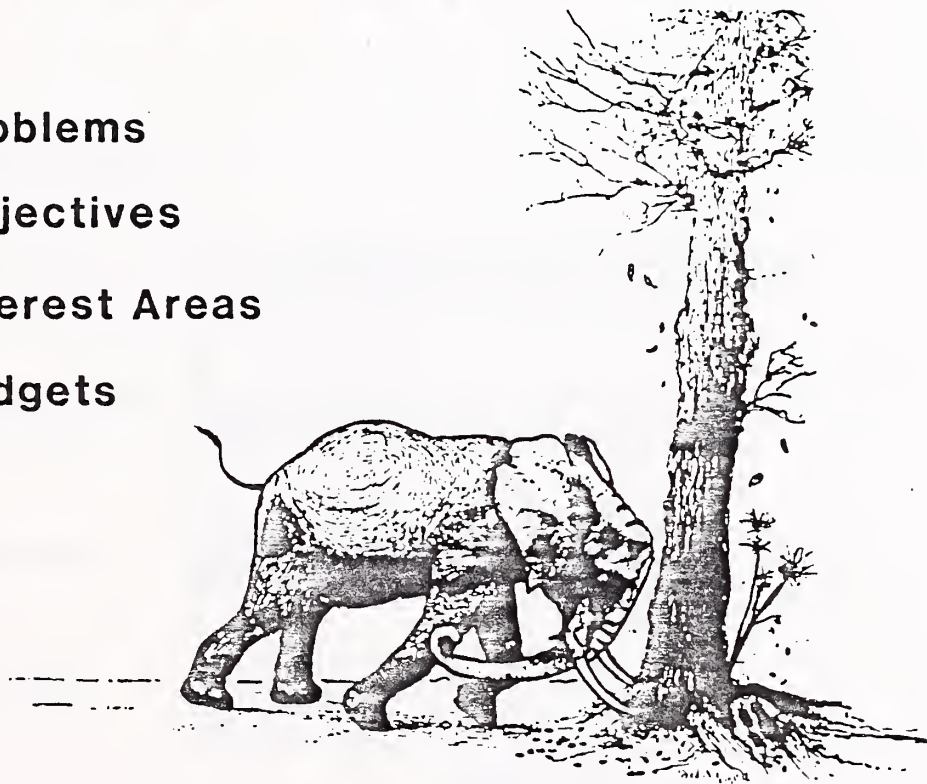
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PLANNING SYSTEMS ARE IN THEIR INFANCY



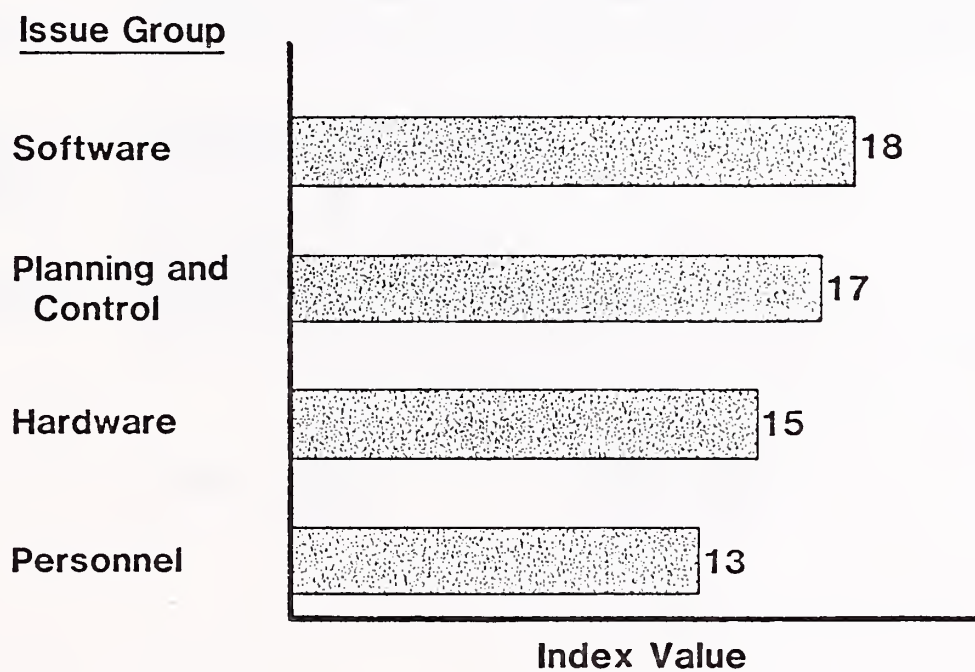
I.S. MANAGEMENT ISSUES

- Problems
- Objectives
- Interest Areas
- Budgets



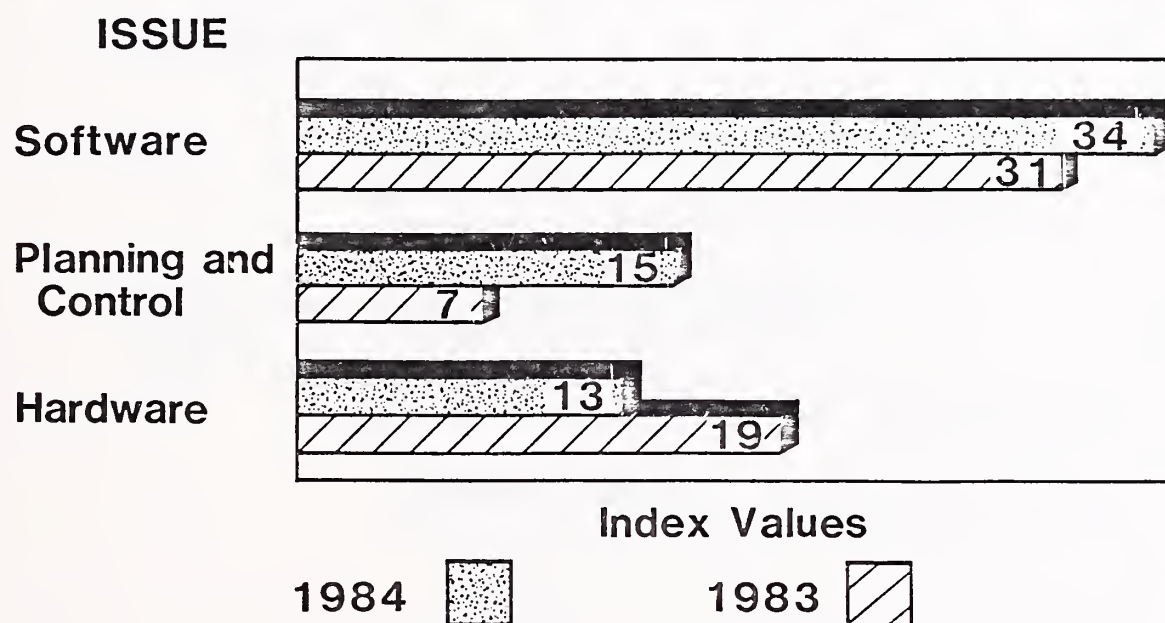
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MOST SEVERE I.S. PROBLEMS



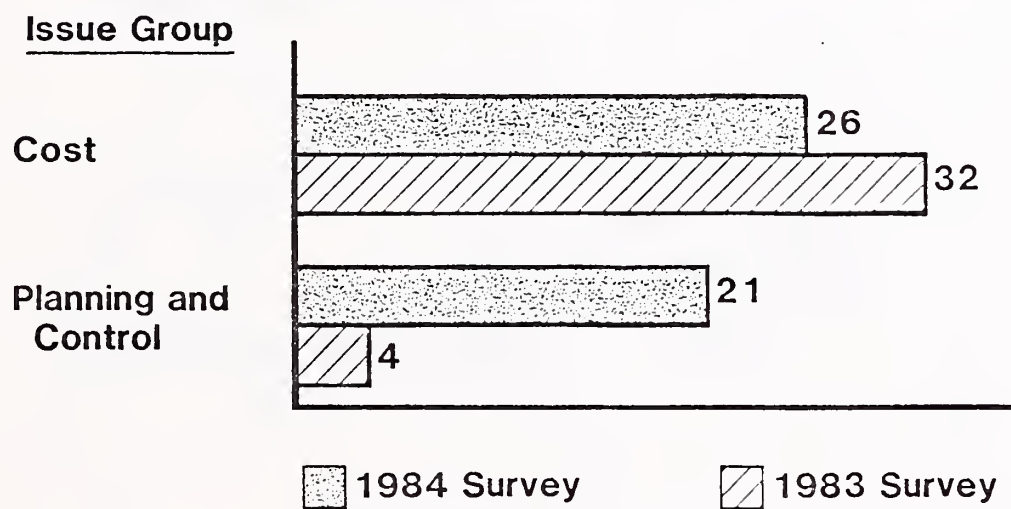
INPUT

SOFTWARE STILL DOMINATES OBJECTIVES



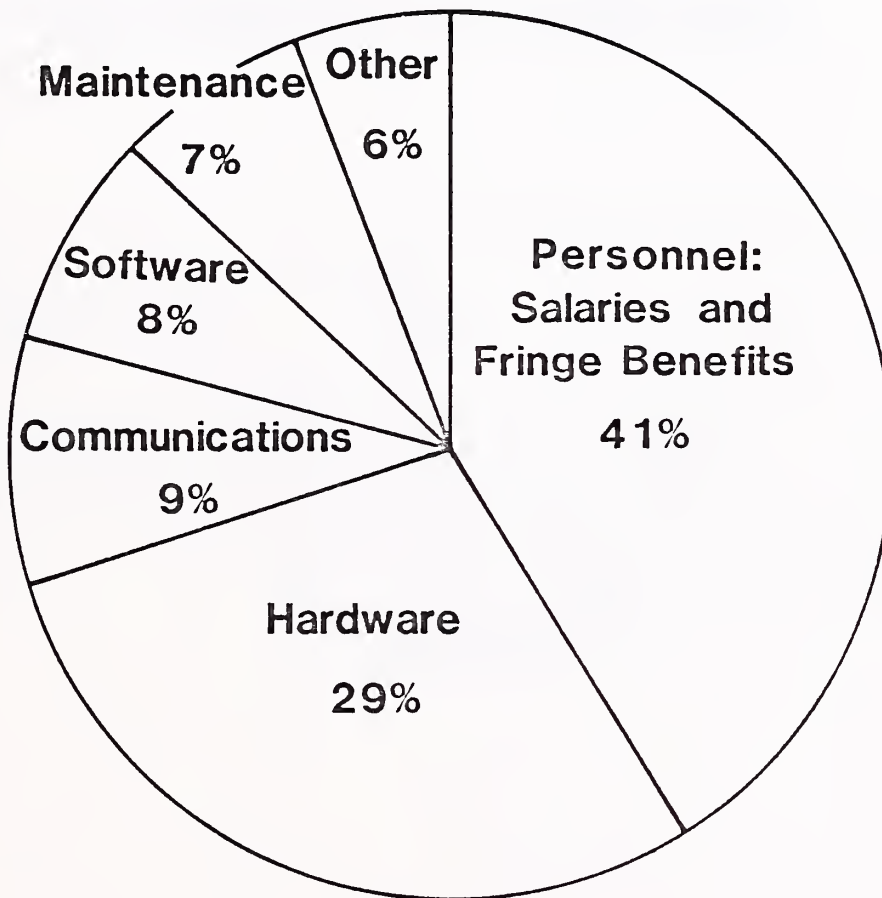
INPUT

SENIOR MANAGEMENT CONCERNS



INPUT

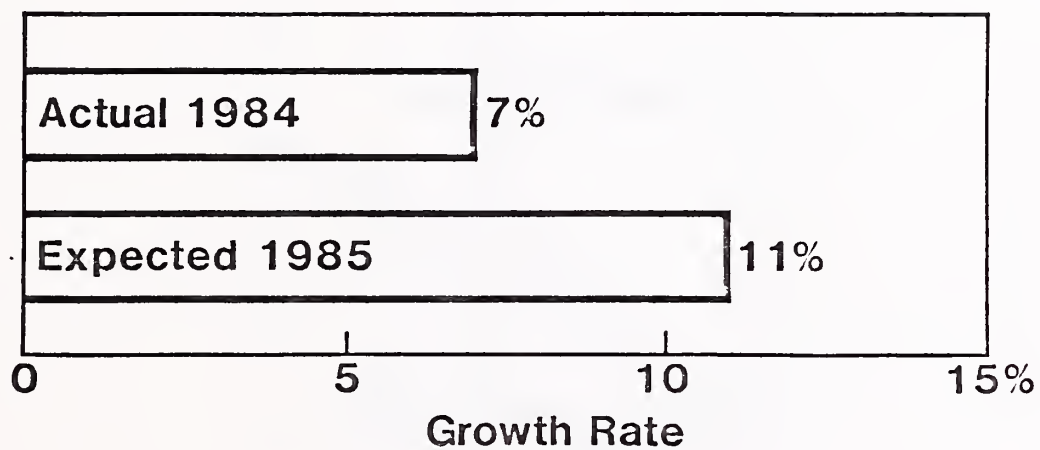
I.S. BUDGETS



1984

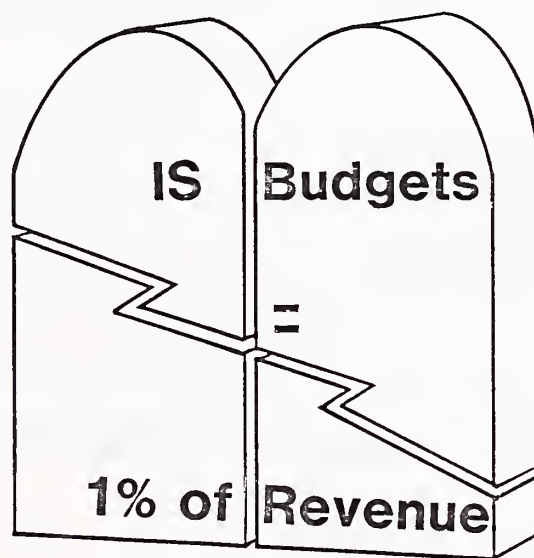
INPUT

I.S. BUDGETS ARE GROWING



INPUT

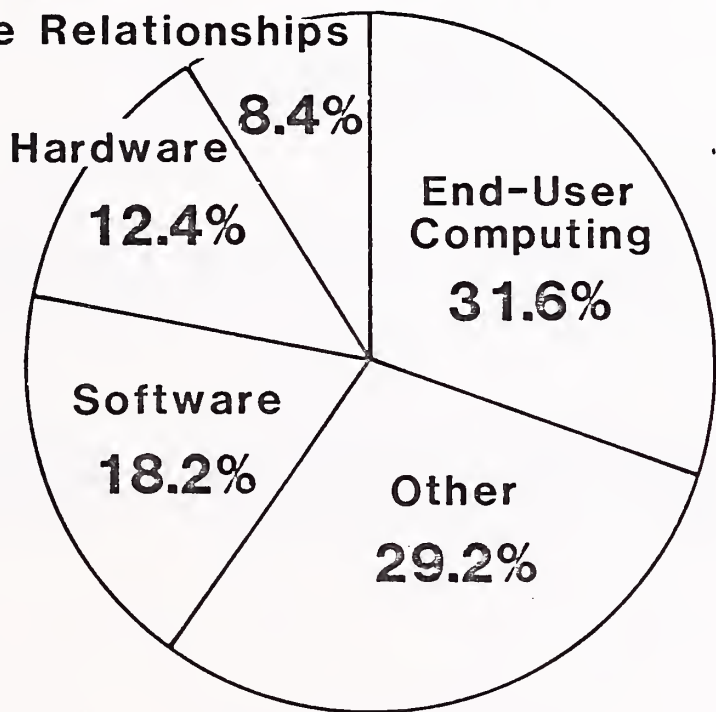
OLD ASSUMPTIONS NO LONGER VALID



INPUT

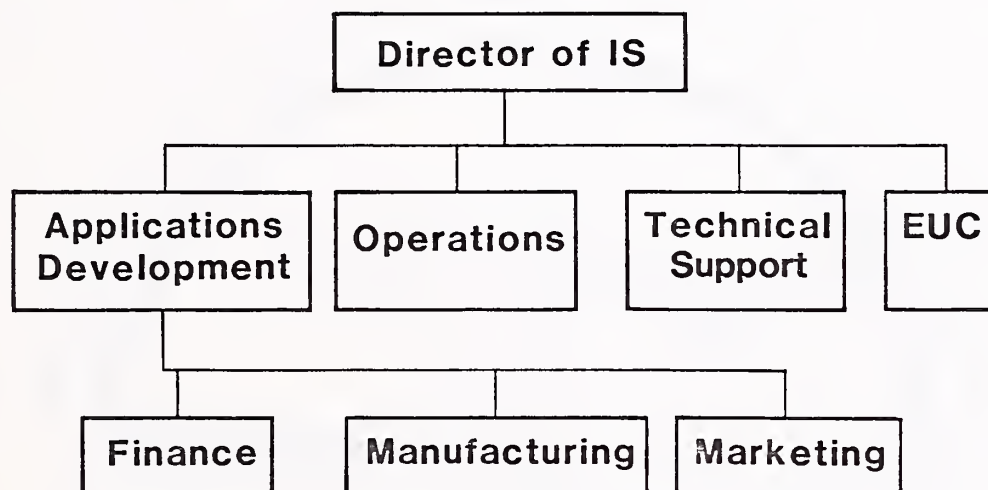
MOST SIGNIFICANT CHANGES AFFECTING LS.

Corporate Relationships



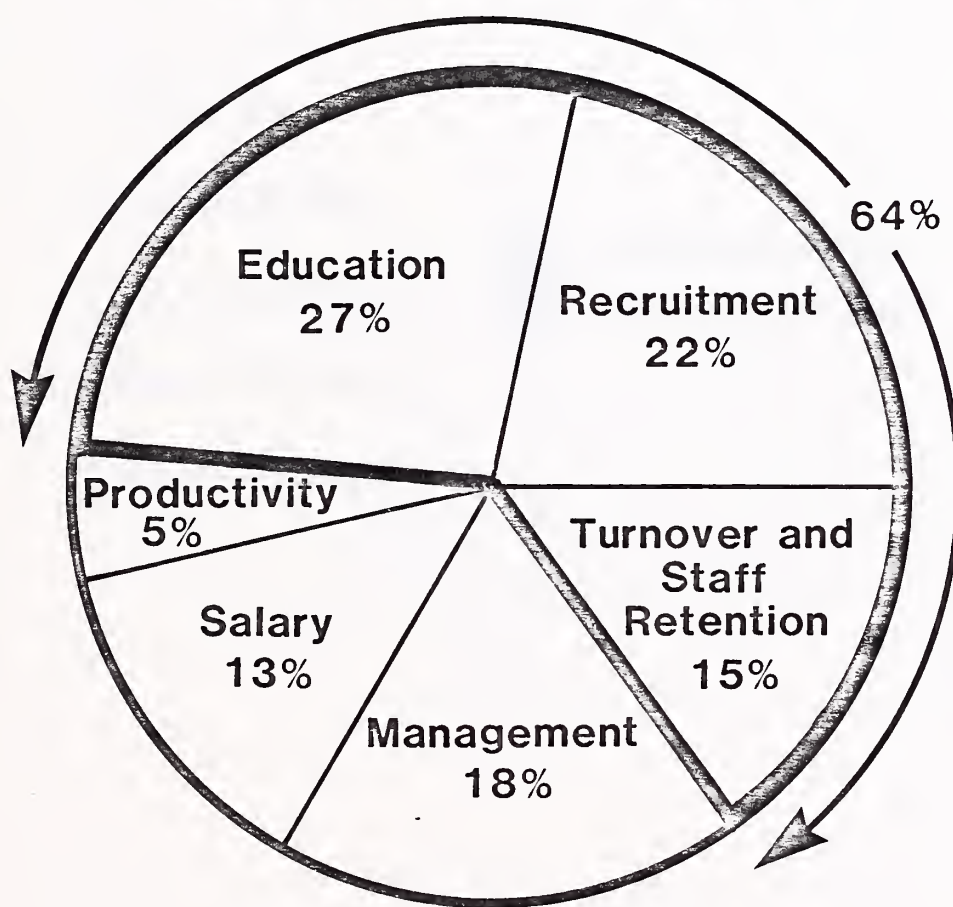
INPUT

I.S. ORGANIZATIONAL TRENDS



INPUT

I.S. PERSONNEL PROBLEMS



Percent of Responses

INPUT

NEW I.S. SKILLS REQUIRED

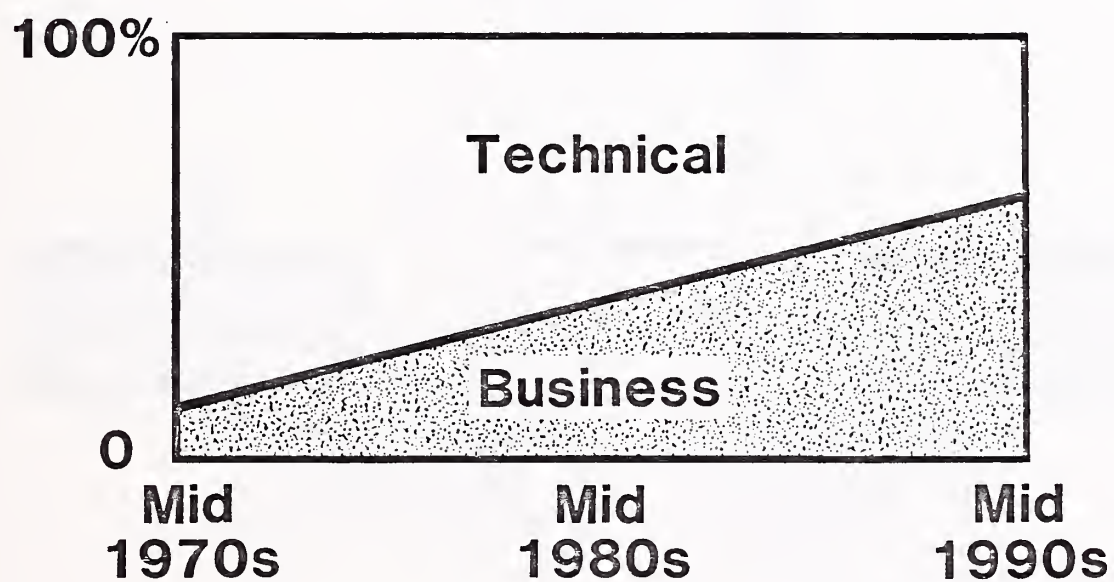
- **Advising**
- **Coaching**
- **Consulting**
- **Facilitating**
- **Teaching**



**Marketing
IS Services**

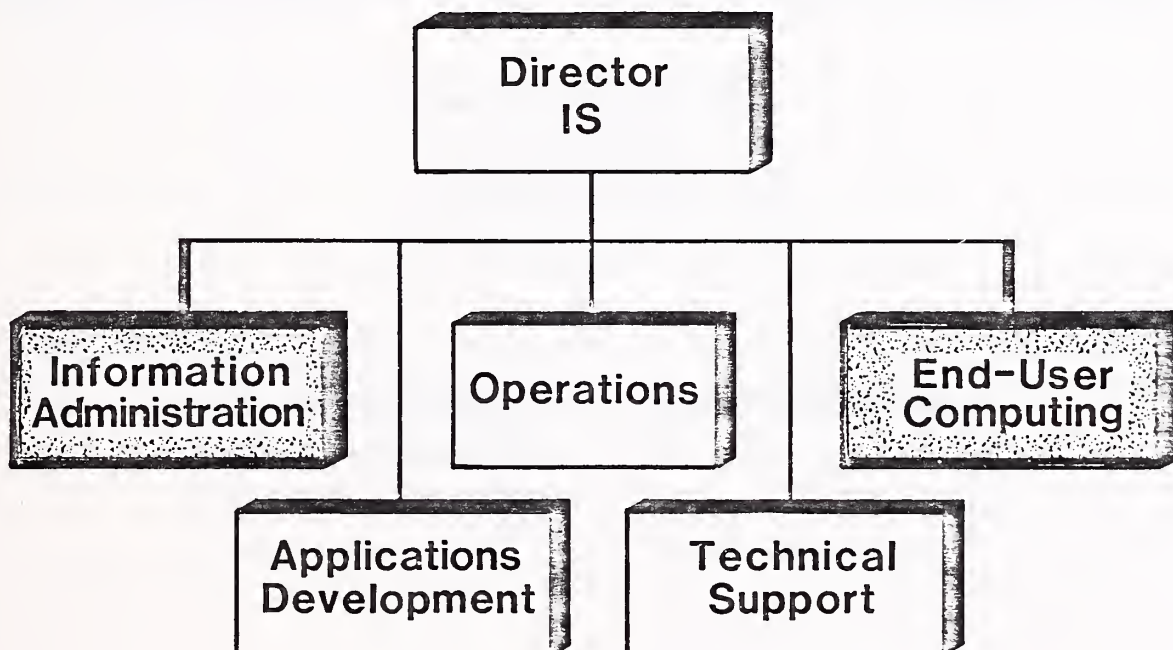
INPUT

BUSINESS SKILLS ARE BECOMING MORE IMPORTANT



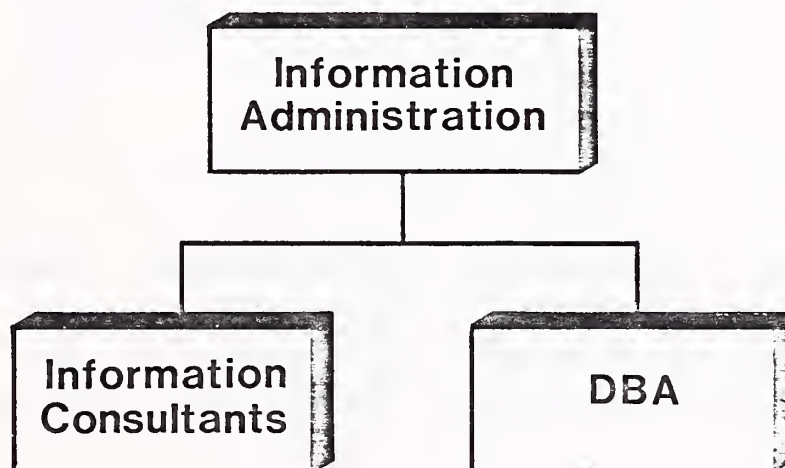
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I.S. ORGANIZATIONS WILL CHANGE



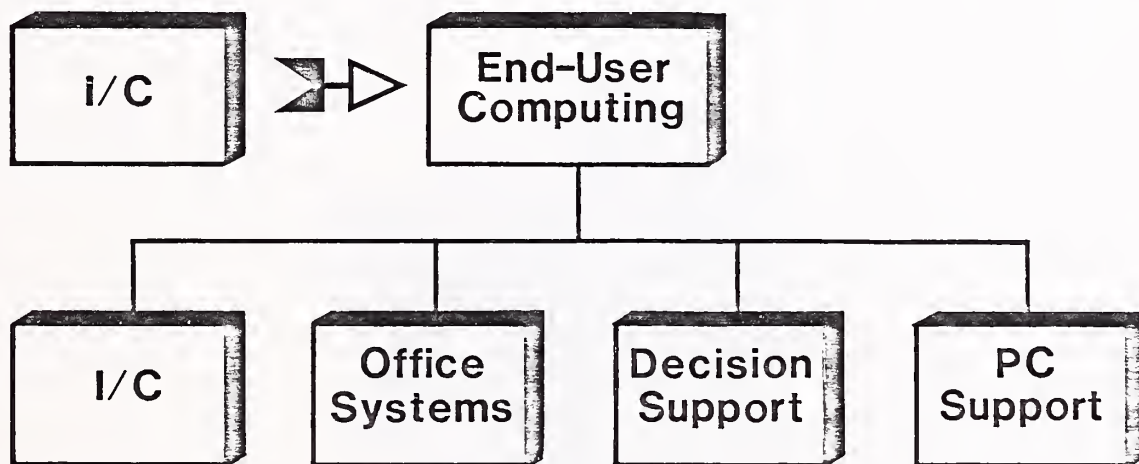
INPUT

INFORMATION ADMINISTRATION - THE CORPORATIONS' DATA COORDINATOR



INPUT

THE INFORMATION CENTER EVOLUTION



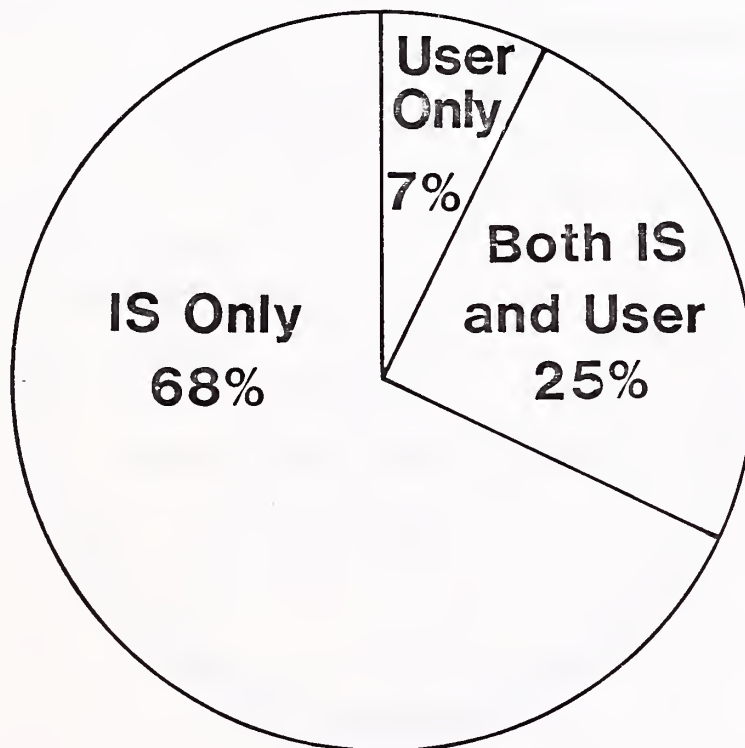
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END-USER DEVELOPMENTS



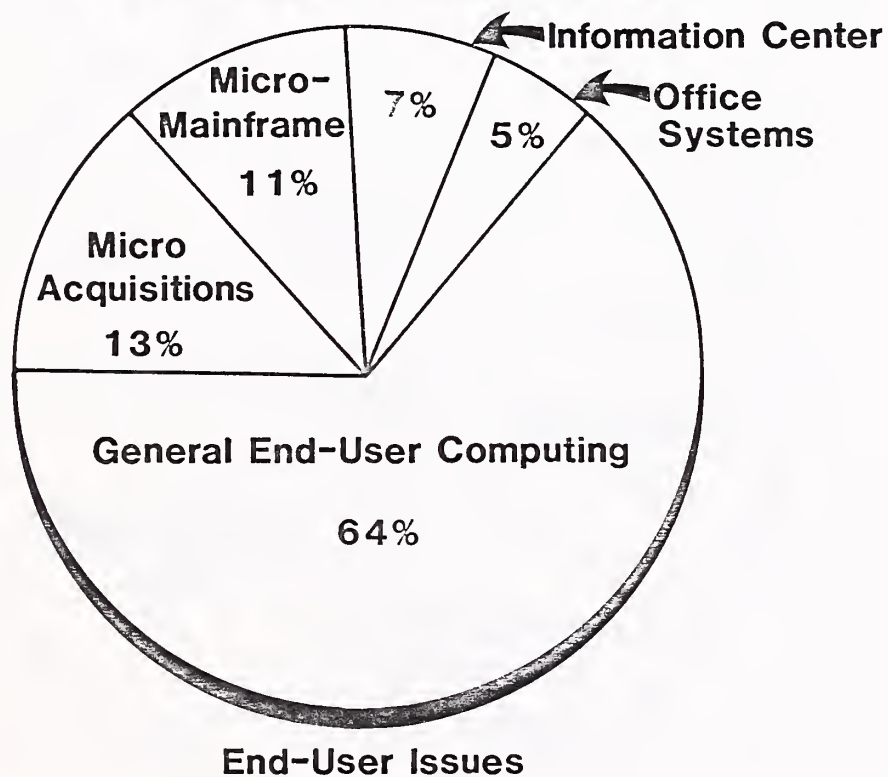
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SOURCE OF END-USER SUPPORT



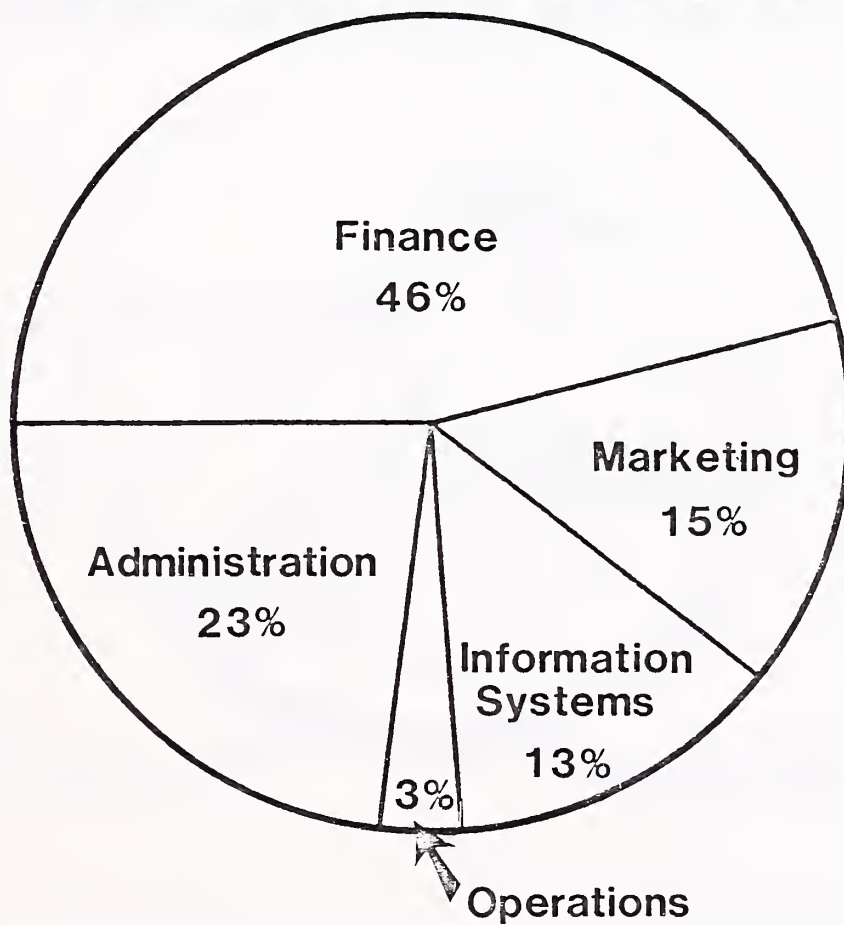
INPUT

UNFOCUSED END-USER COMPUTING CONCERNS



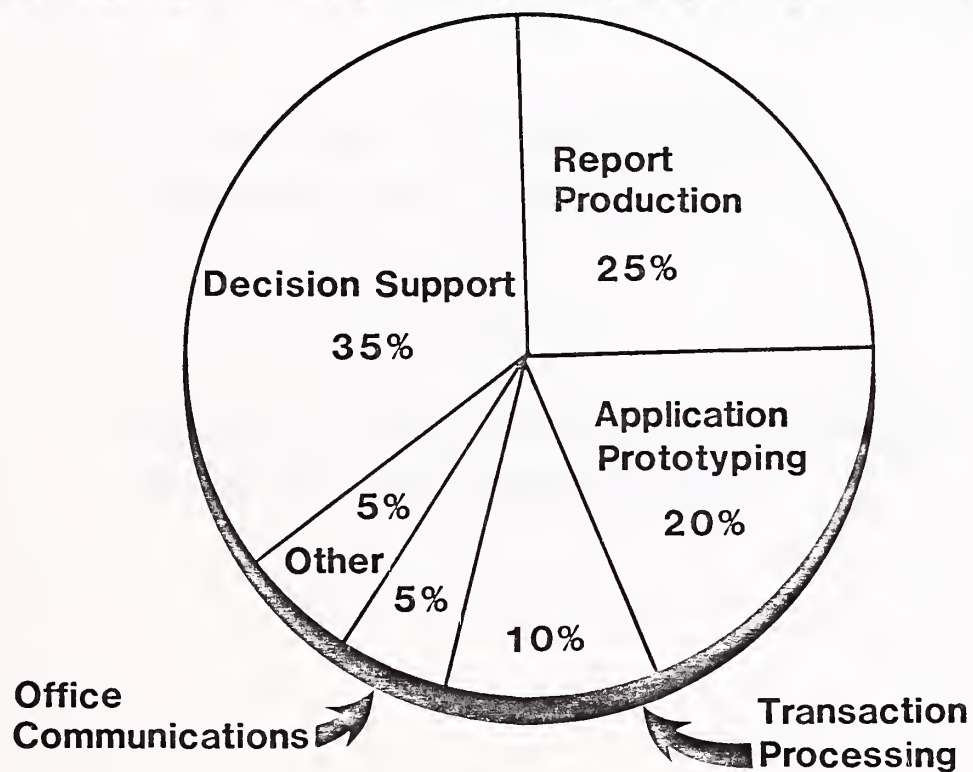
INPUT

DEPARTMENTS USING THE INFORMATION CENTER



INPUT

DECISION SUPPORT LEADS INFORMATION CENTER APPLICATIONS



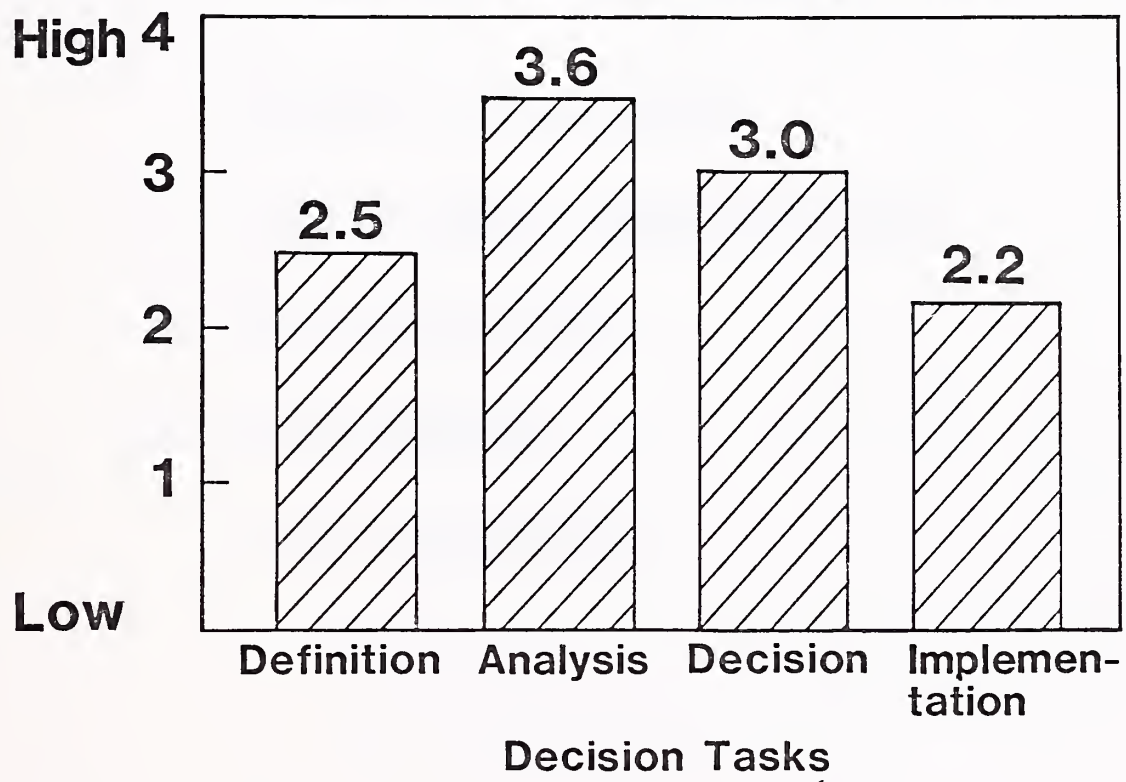
INPUT

PERSONAL INFORMATION CENTERS ARE COMING

- **Extension to Mainframe
Information Centers**
- **Decision Support**
- **Report Generation Integrated
With Word Processing**

INPUT

DSS IS AN ANALYSIS TOOL



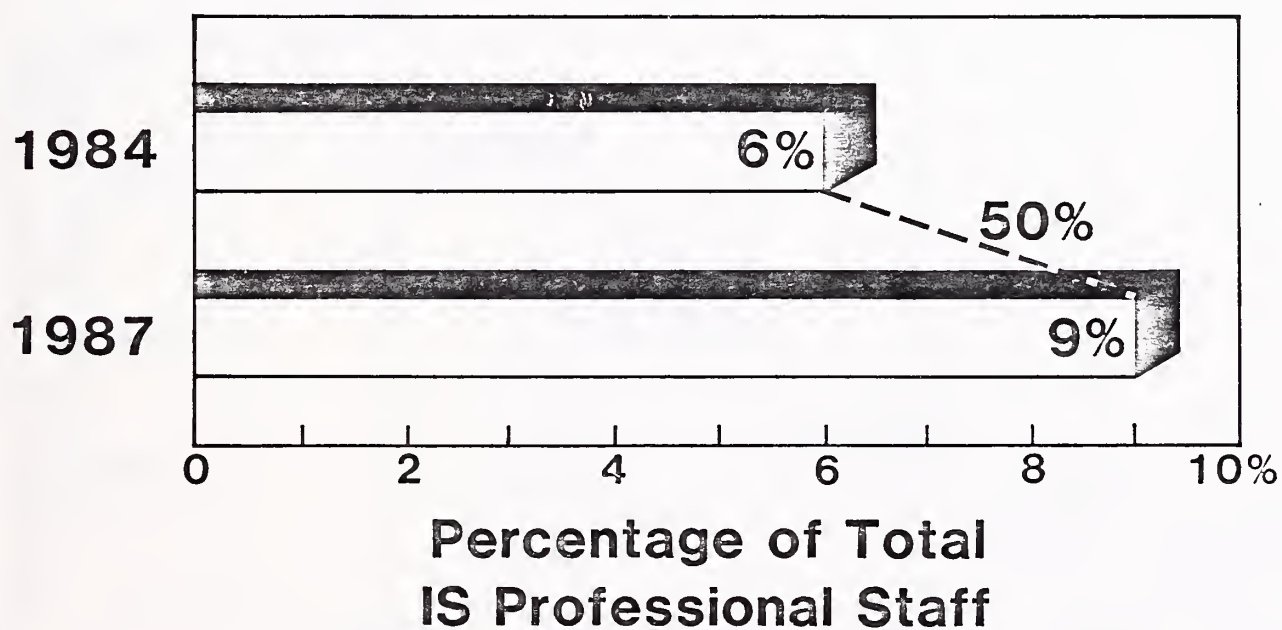
INPUT

TOP DSS FUNCTIONS

- **Data Acquisition**
- **Data Base Management**
- **Forecasting**
- **Modeling**
- **Spreadsheet**

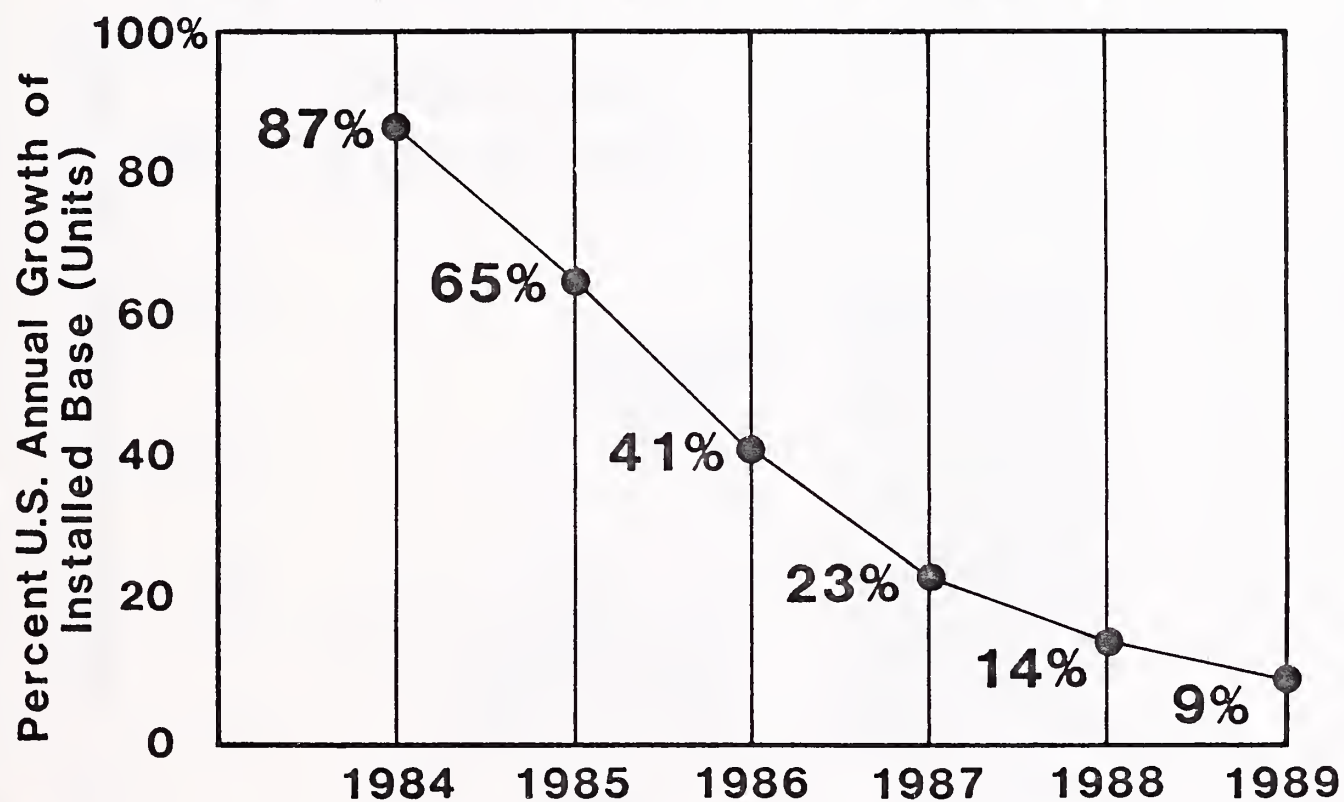
INPUT

**INFORMATION CENTER
AVERAGE PROJECTED PERSONNEL GROWTH
1984-1987**



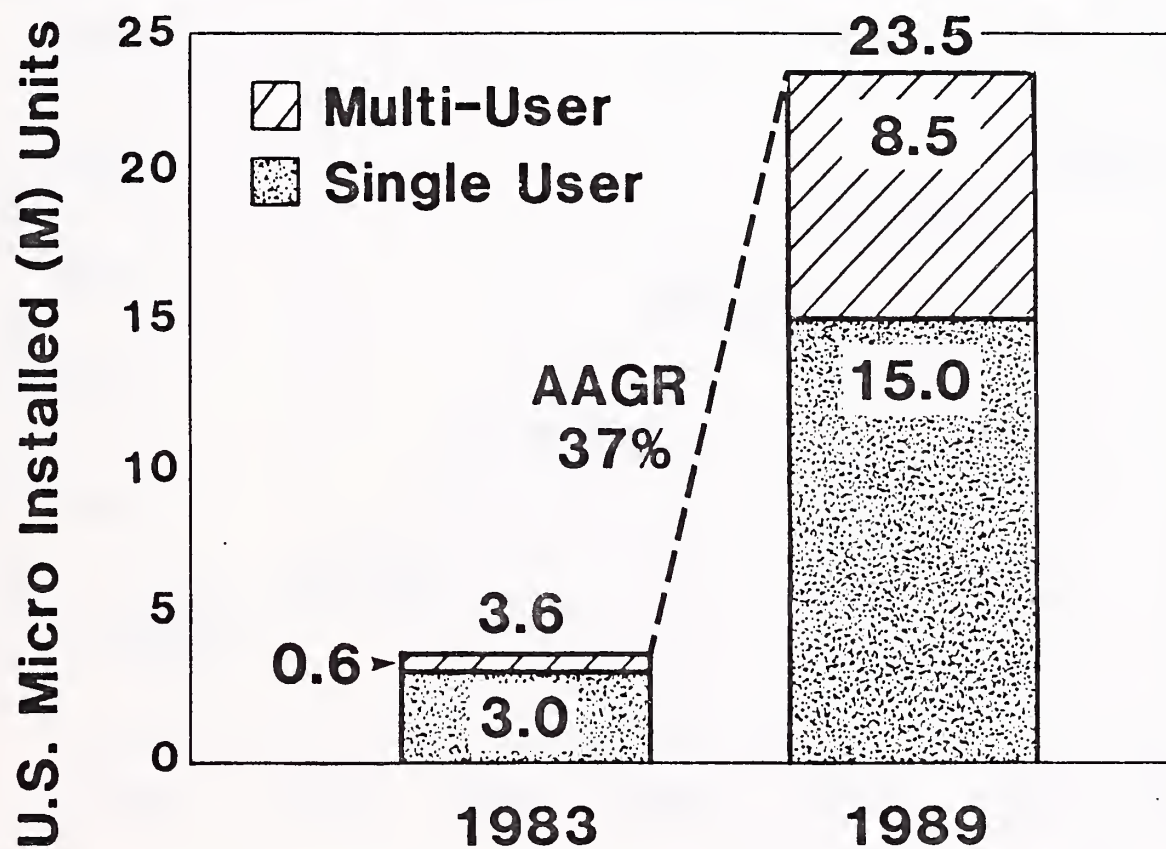
INPUT

GROWTH RATE OF INSTALLED MICROS IS DECLINING



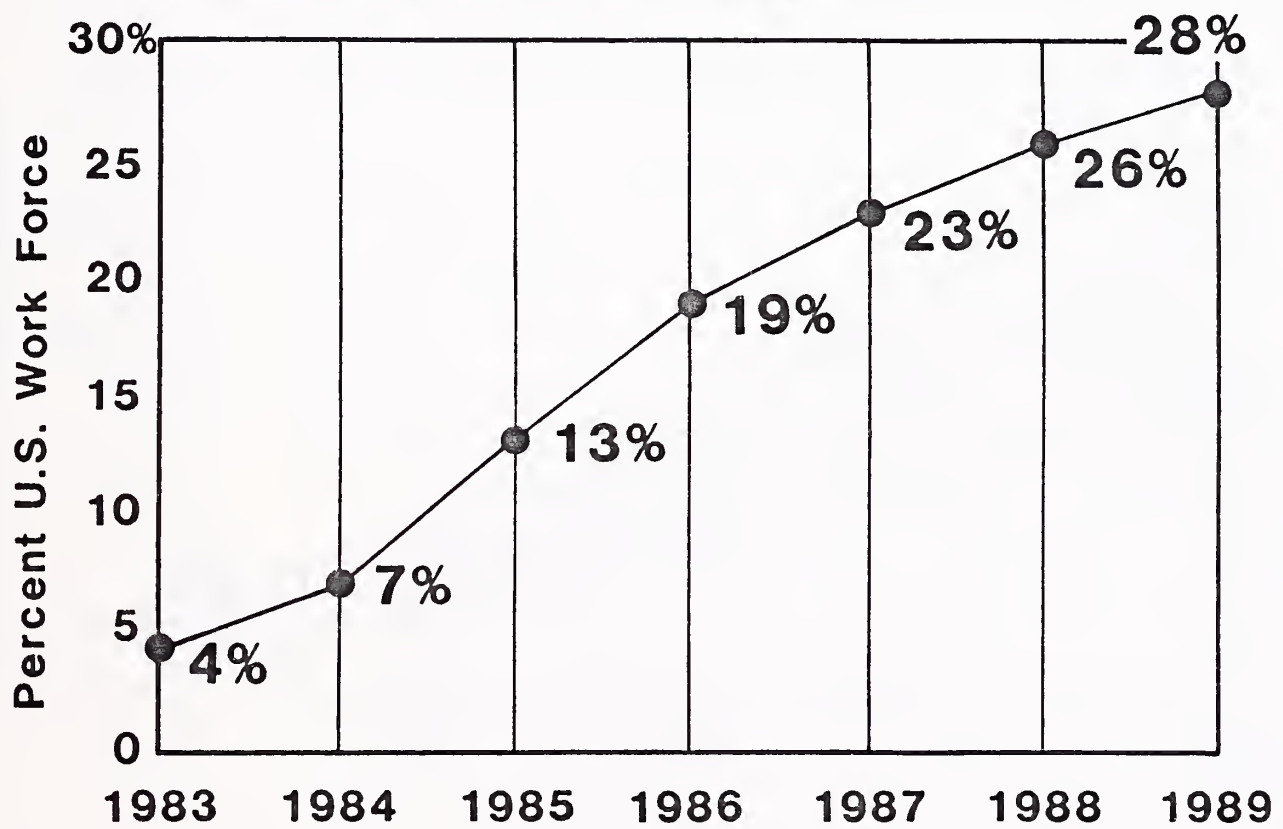
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GROWTH OF INSTALLED BASE IS SIGNIFICANT



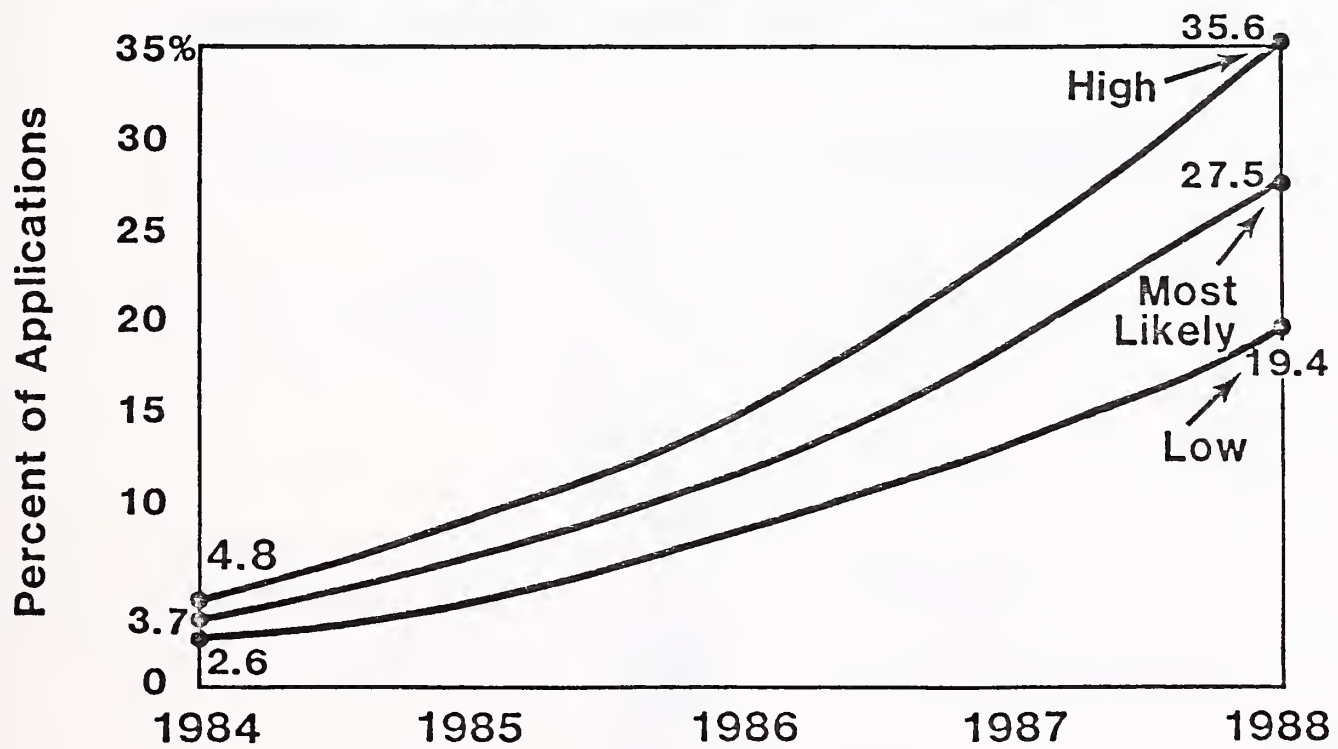
INPUT

INCREASING MICRO PENETRATION



INPUT

MICRO-MAINFRAME APPLICATIONS GROWTH: 1984-1988



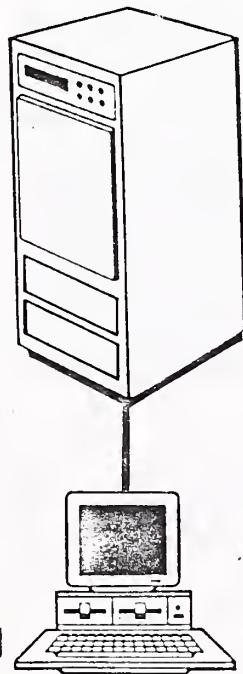
INPUT

END-USER AND I.S. VIEW MICRO-MAINFRAME DIFFERENTLY

End Users



- Self-Determination
- Two-Way Data
- Operations and Analytic Use



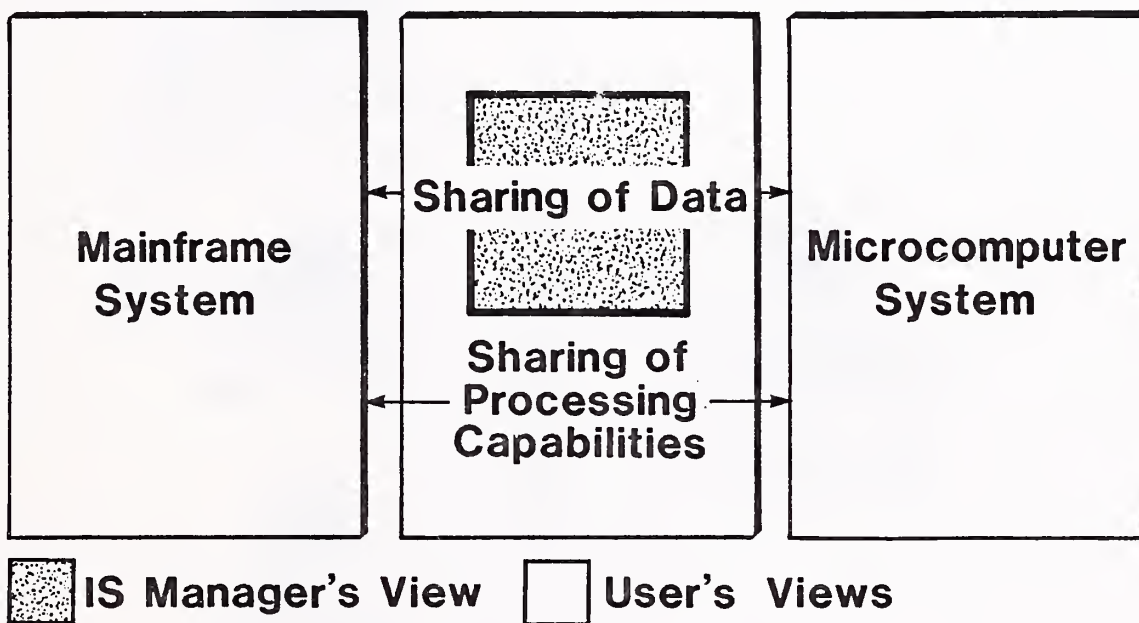
IS Management



- Control
- One-Way Data
- Analytic Use

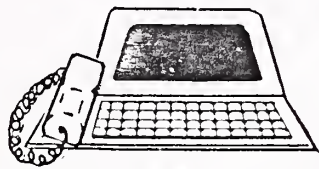
INPUT

VIEWS OF SHARED FUNCTIONALITY



INPUT

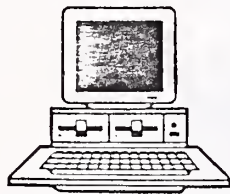
WORKSTATION EVOLUTION



Intelligent Telephone

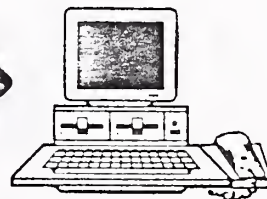


Workstation



Personal Computer

1984

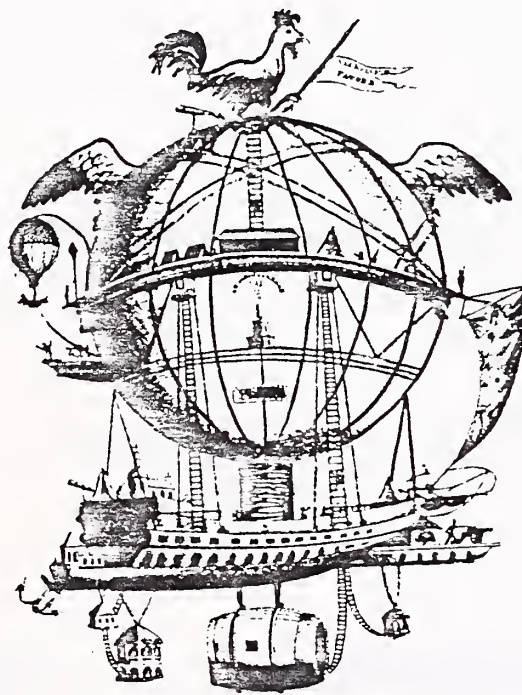


Multifunctional
Workstation

1986

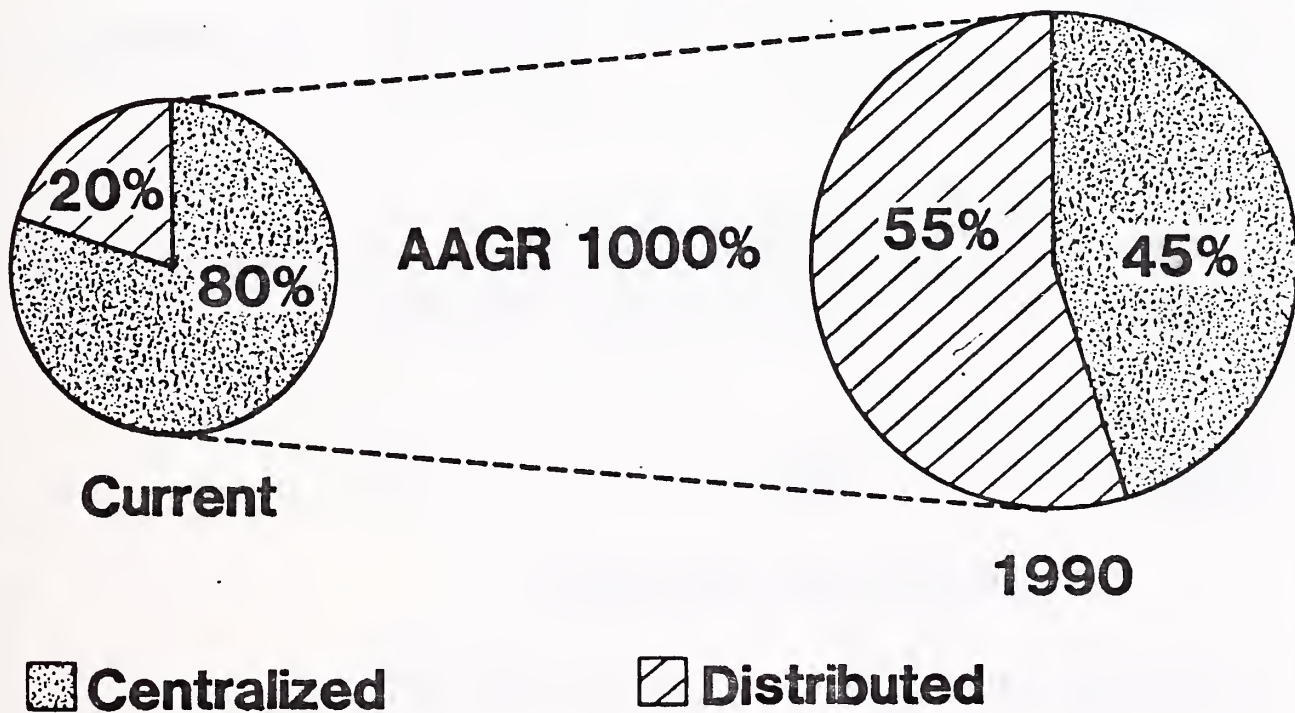
INPUT

CENTRAL I.S. ISSUES



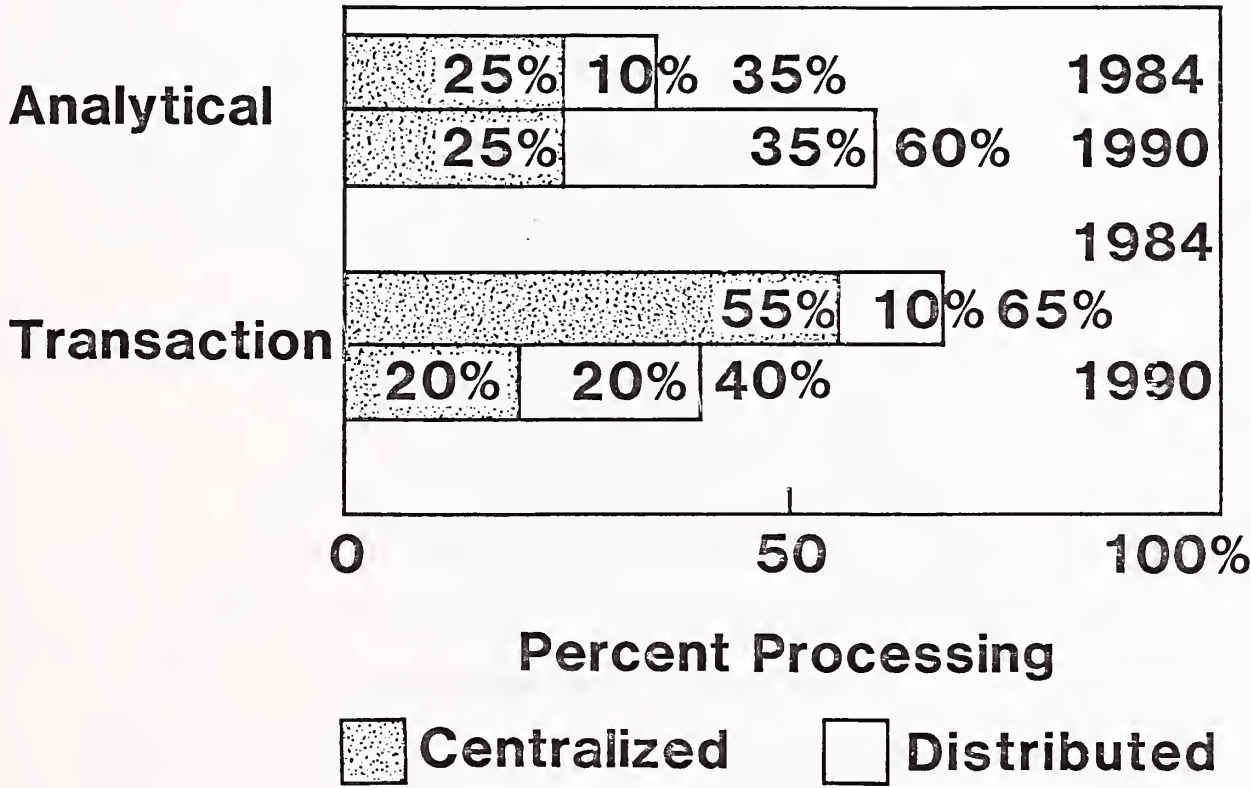
INPUT

PROCESSING IS BECOMING MORE DECENTRALIZED



INPUT

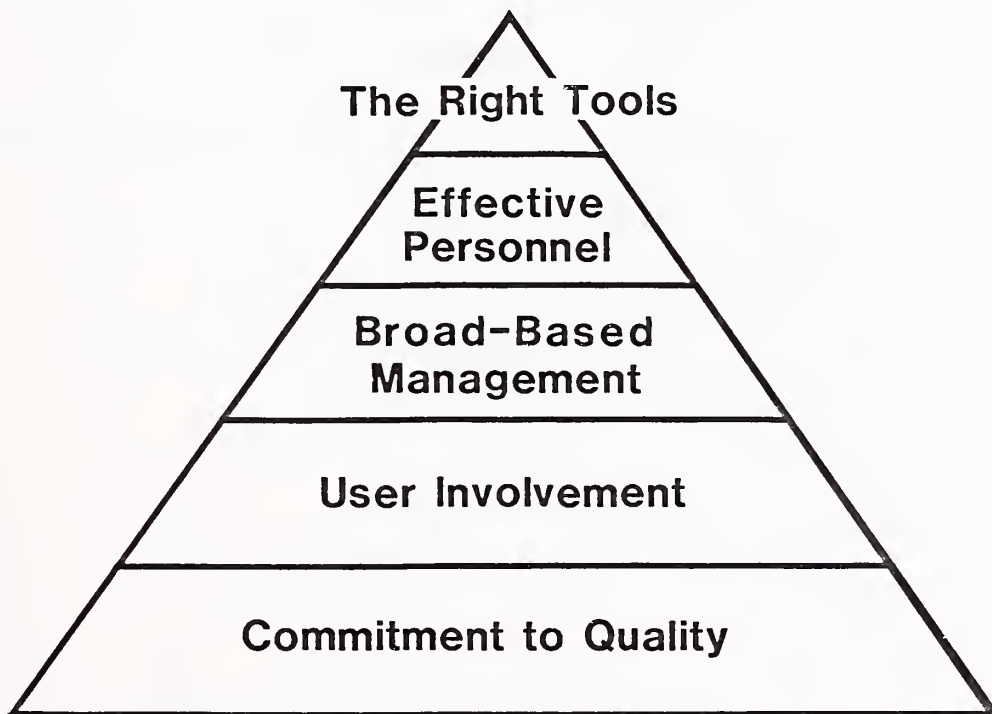
FOCUS IS CHANGING



INPUT

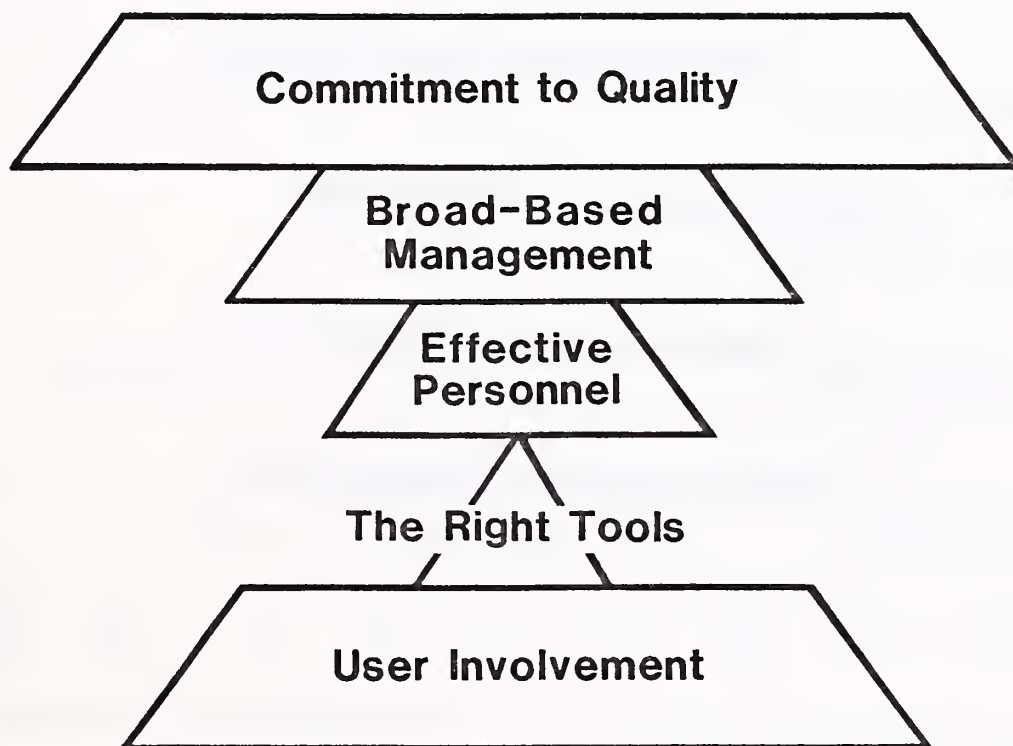
PRODUCTIVE PYRAMID

1979-1980



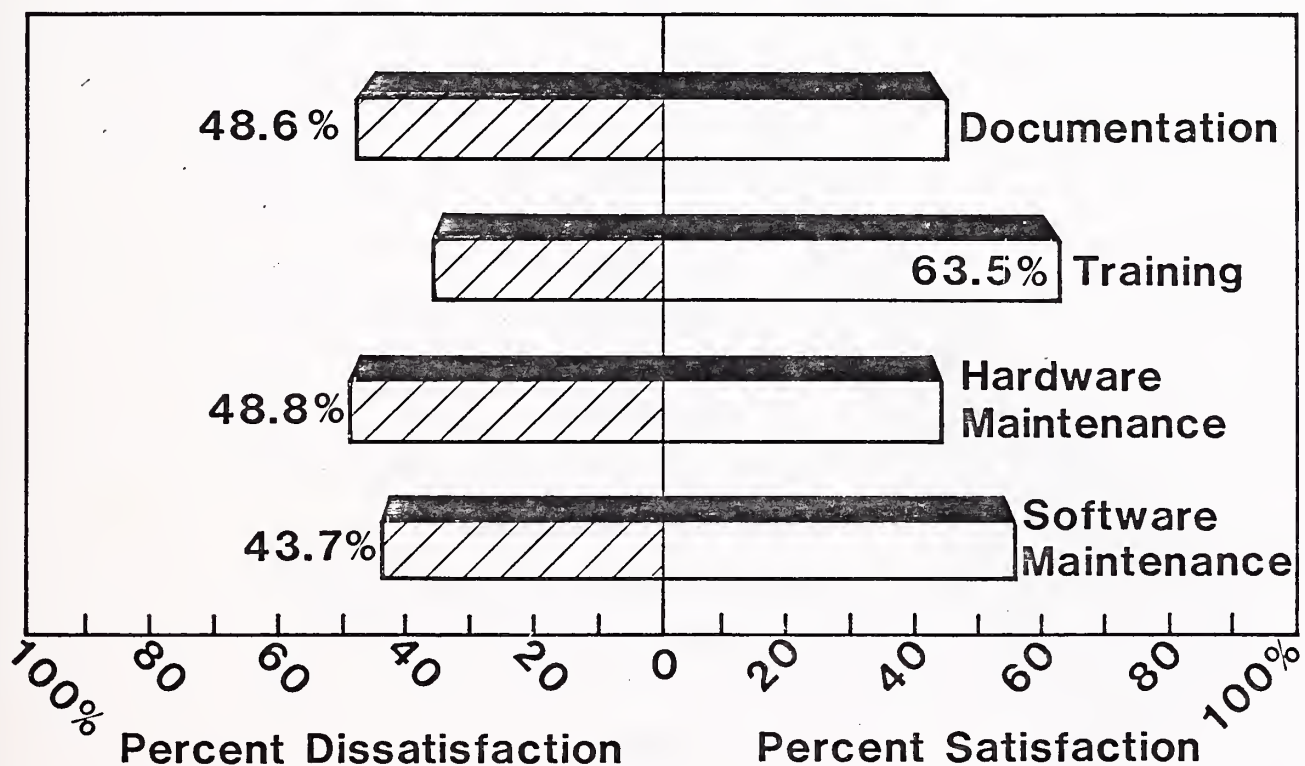
INPUT

THE RESTRUCTURED PRODUCTIVITY PYRAMID 1984



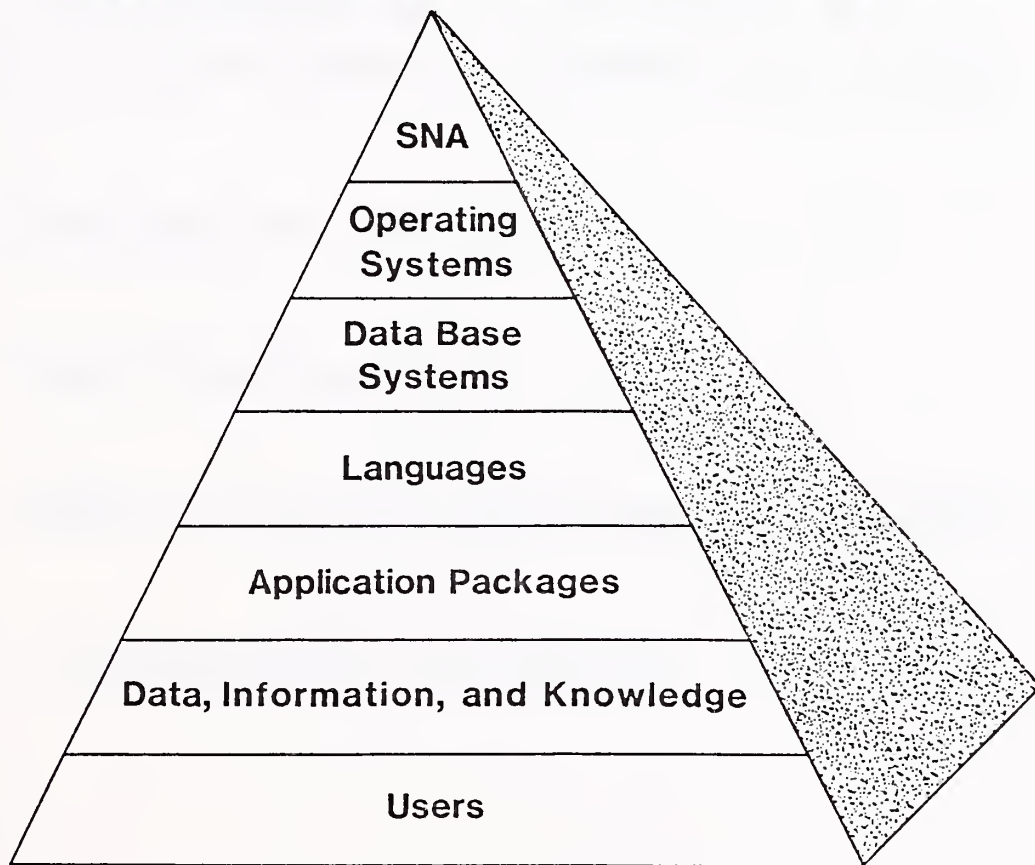
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MOST IMPORTANT VENDOR SERVICE AREAS EXPERIENCE



INPUT

SNA IS THE CAPSTONE OF IBM'S SOFTWARE STRATEGY



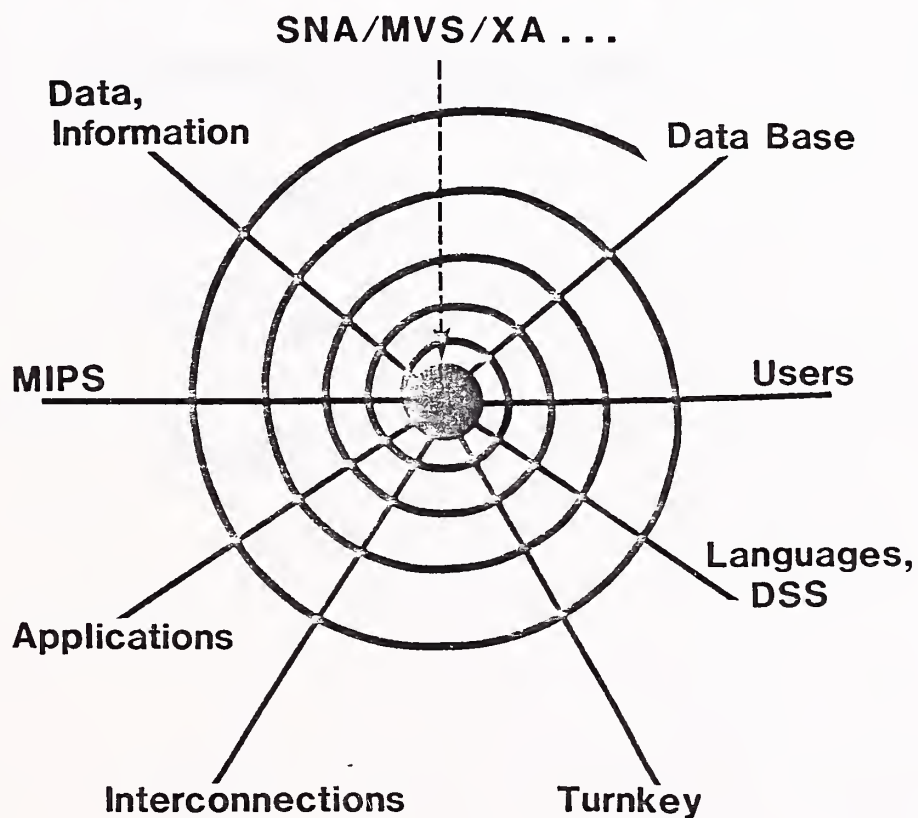
INPUT

SOFTWARE IS A CATALYST TO SUCCESSFUL MANAGEMENT SYSTEMS

- **Integrated Software**
- **Intuitive Systems**
- **Broad Span of Information Sources**
- **Transparent Interfaces**

INPUT

THE GREAT BLUE HOLE OF SYSTEMS SOFTWARE



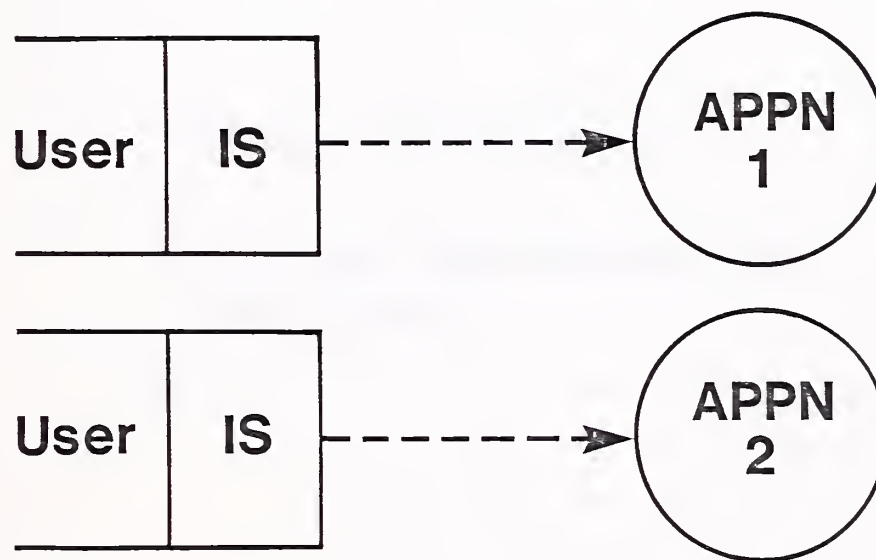
INPUT

CURRENT DEVELOPMENT PROCESS

- **Different Application**
 - **States**
 - **Cycles**
 - **Goals**

INPUT

CURRENT DEVELOPMENT PROCESS



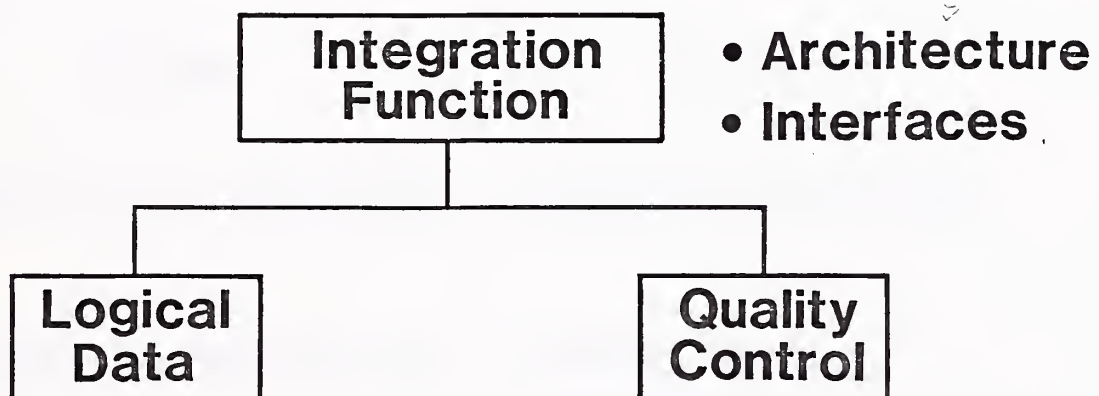
INPUT

NEED FOR INTEGRATION

- **Major IS Problem**
- **Current Structures Do Not Work**

INPUT

NEED FOR INTEGRATION FUNCTION



INPUT

DEVELOPMENT PROCESS

NOW

FUTURE

- Application Oriented
- System Oriented
- Compartmentalized
- Integrated ≠ Centralized

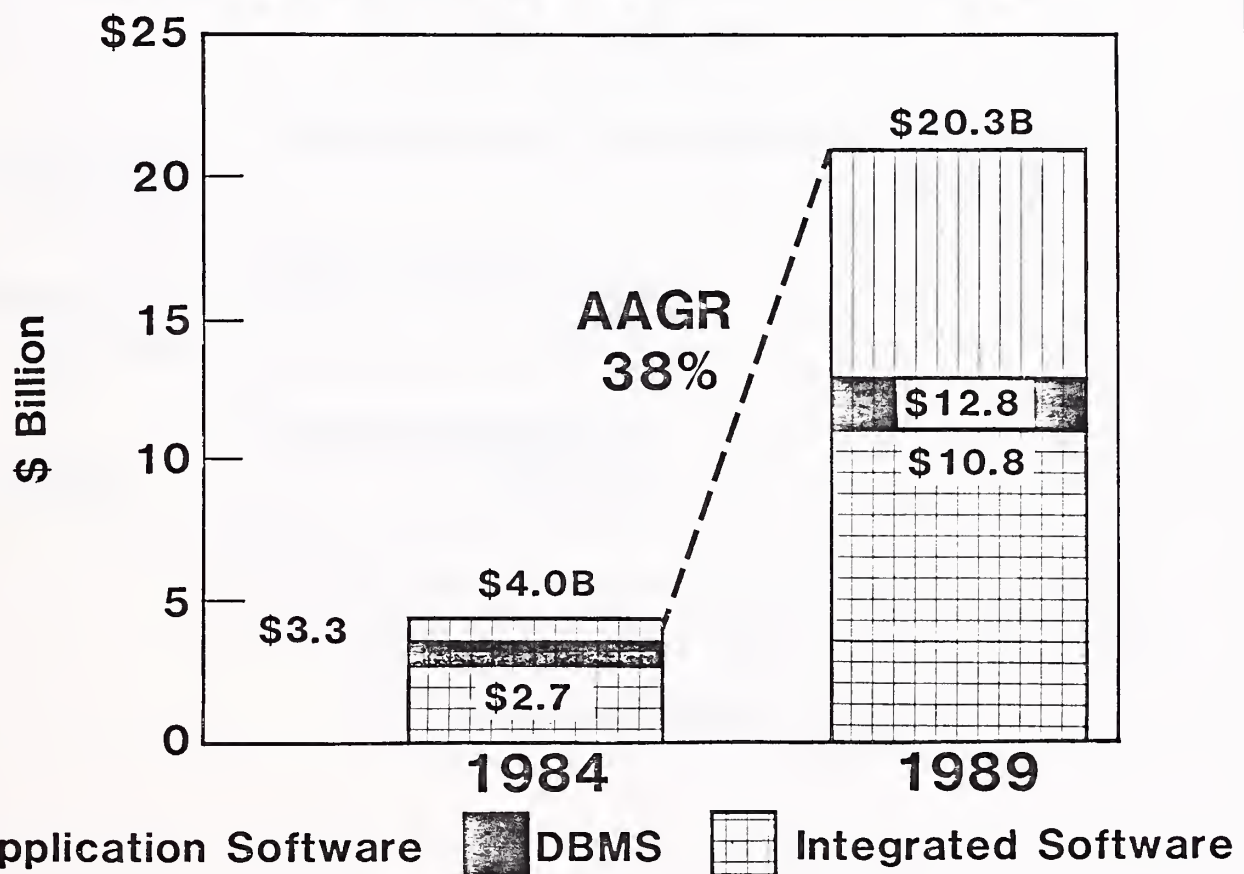
INPUT

VENERABLE IMS WILL LAST THROUGH 1990

- **Widely Used**
- **Operational Files**
- **Difficult to Convert**

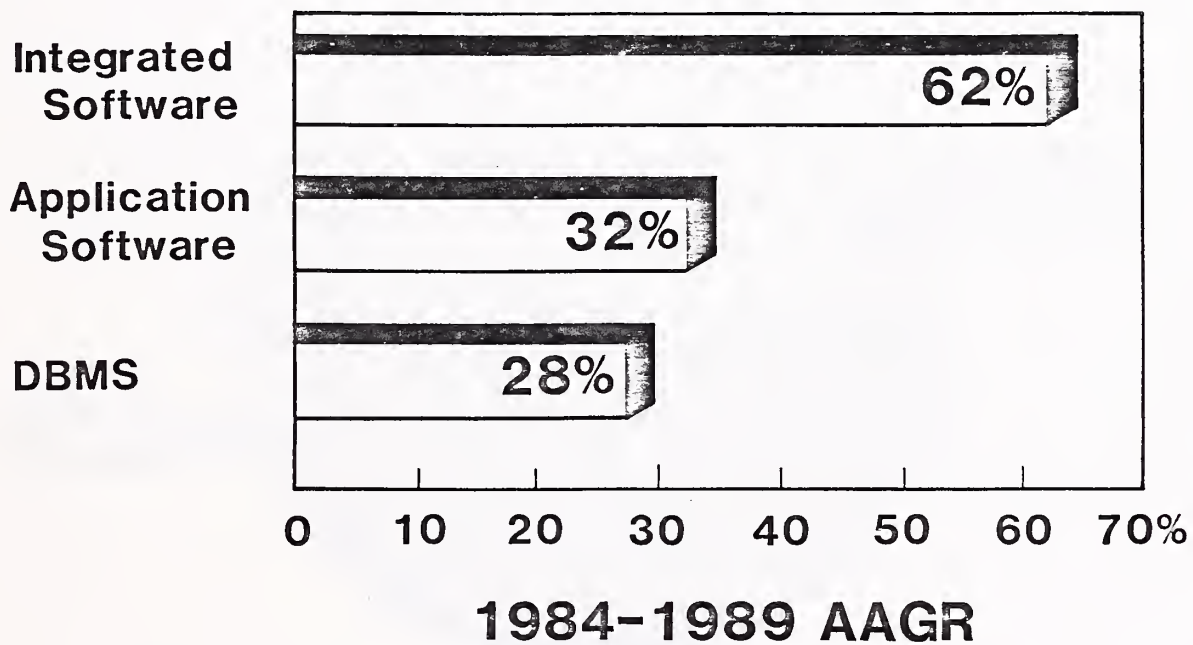
INPUT

SOFTWARE CONTINUES TO GROW



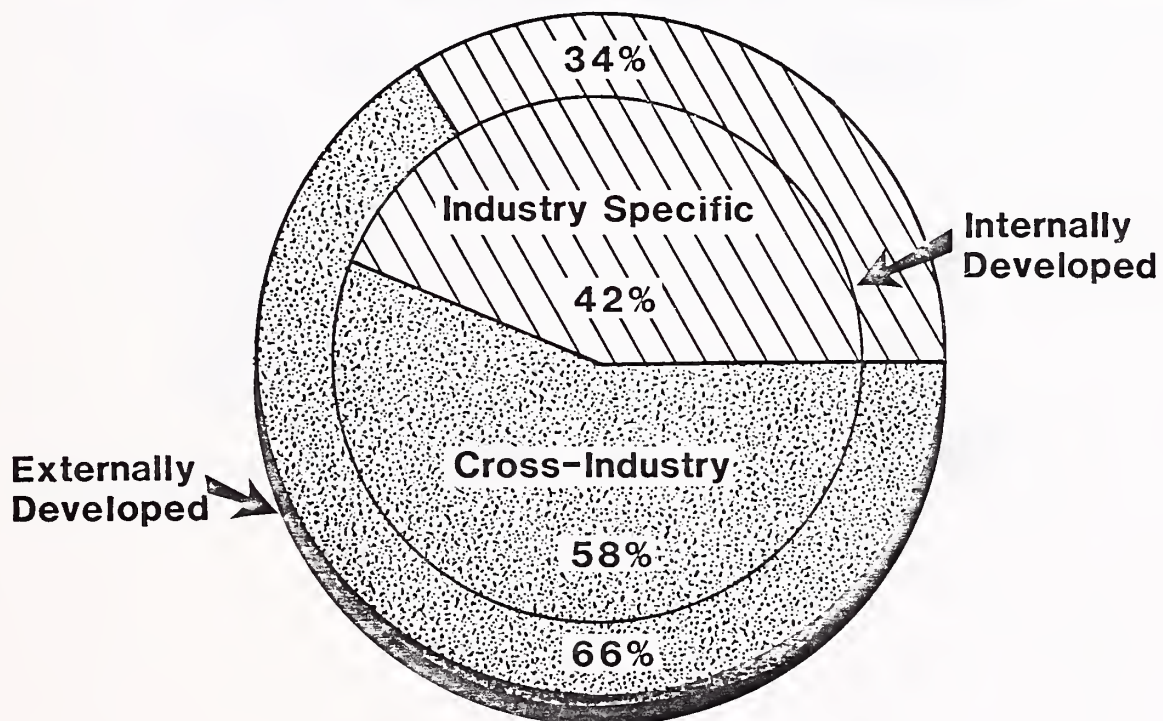
INPUT

INTEGRATED SOFTWARE GROWTH IS EXPLOSIVE



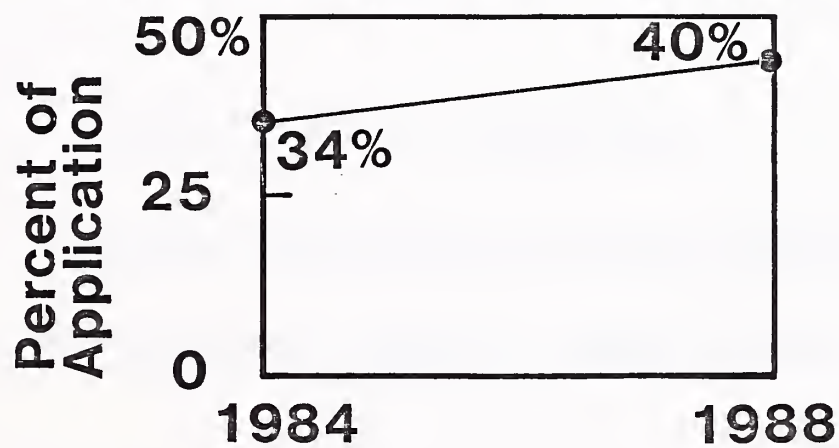
INPUT

THE MAJORITY OF TOP I.S. APPLICATIONS ARE CROSS INDUSTRY . . .



INPUT

BUT INDUSTRY-SPECIFIC APPLICATIONS ARE GROWING



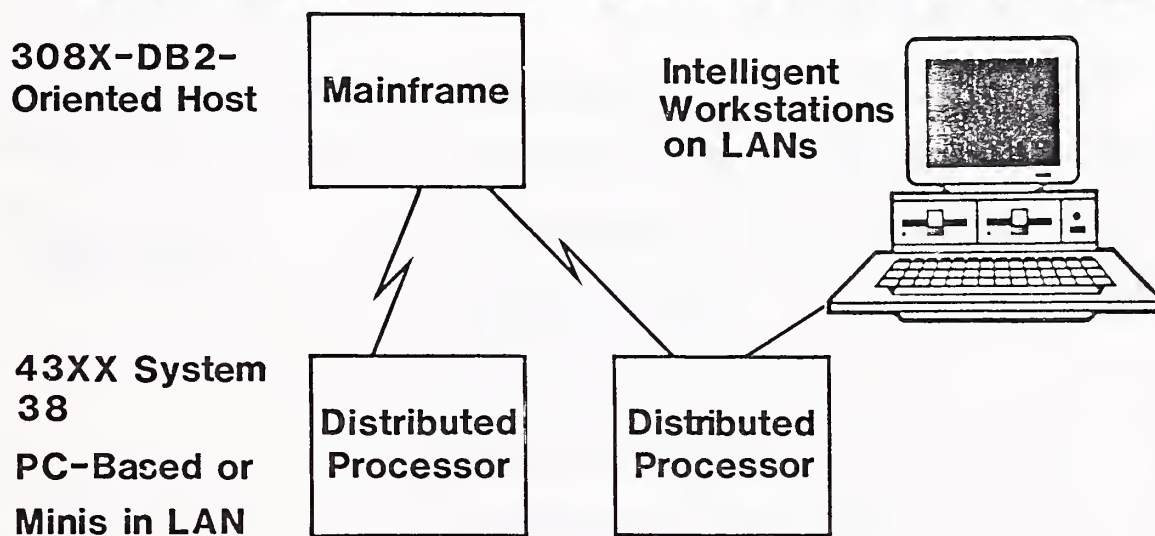
INPUT

RELATIONAL DB = DATA BASE MACHINE

- **Performance Sensitive**
- **Large Resource Requirement**
- **Simplicity Masks High Cost**

INPUT

PROJECTED STRUCTURE OF DISTRIBUTED DATA INFORMATION BASES

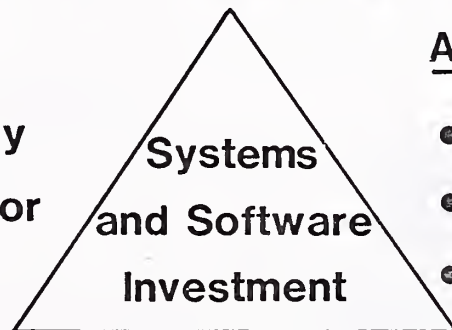


INPUT

SECURITY IN THREE DEMENSIONS

PEOPLE

- Corporate Policy
- Security Director
- Education/
Personnel



ADMINISTRATION

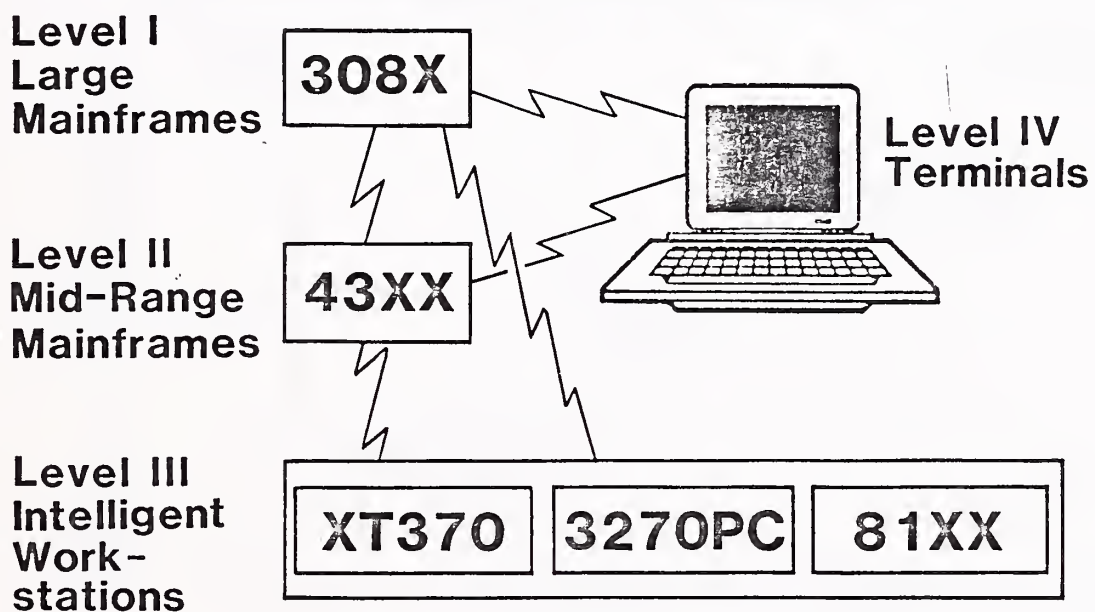
- Fire Protection
- Disaster Recovery
- Legal/Insurance

TECHNOLOGY

- Host Processors
- User Networks
- Intelligent Terminals

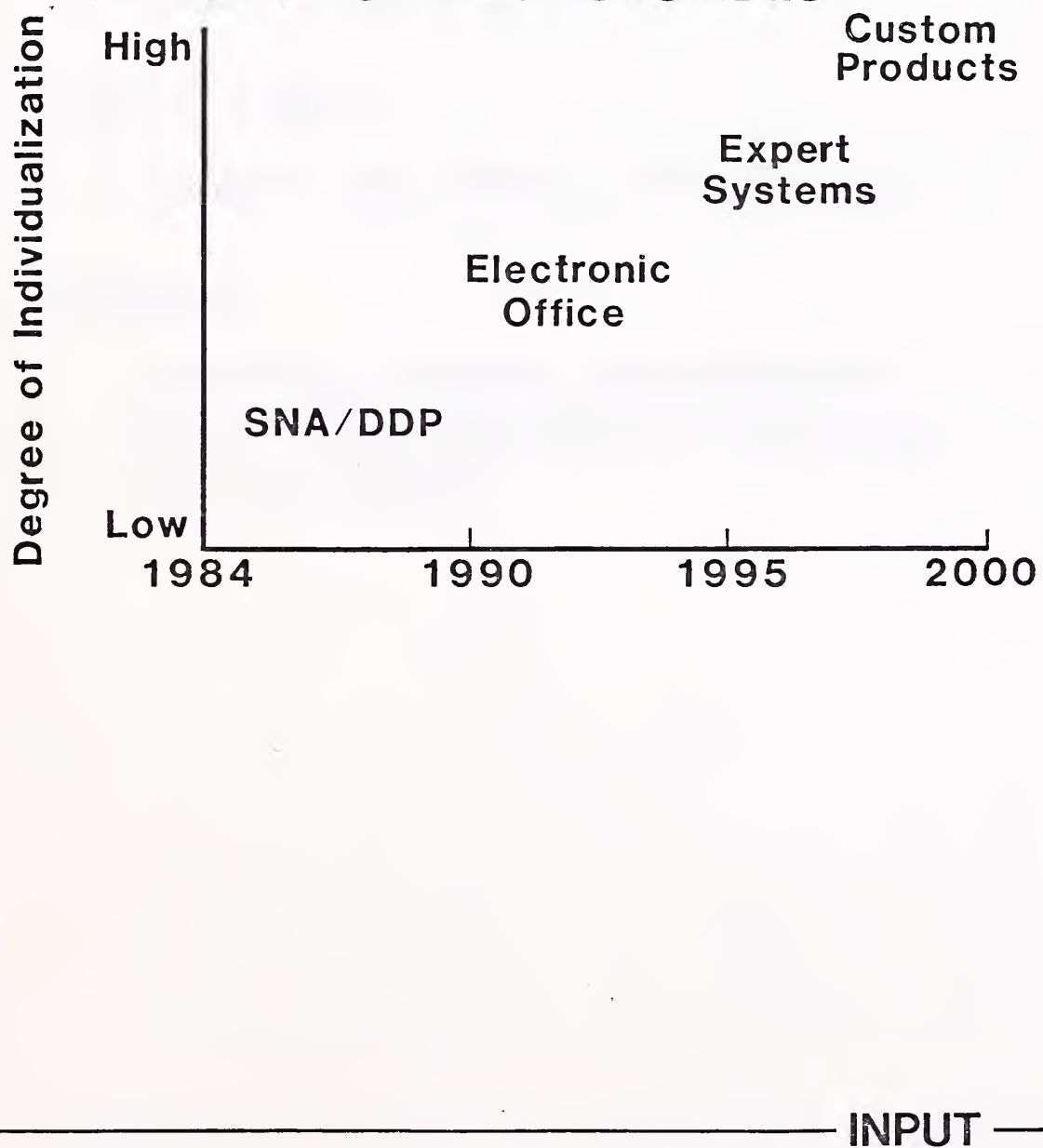
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IBM'S PROCESSING HIERARCHY



INPUT

IBM STRATEGIES ARE FOCUSING ON INDIVIDUALIZED SYSTEMS



IBM APPLICATION SOFTWARE STRATEGY

- **Late 1980's**

Acquire and Market PC Software

- **1990's**

**Develop, Acquire, and Market
Integrated Application Software
for the Office**

INPUT

LARGE MAINFRAMES ARE BECOMING CORPORATE STORAGE DEVICES

- **Micro-Mainframe Links**
- **Corporate Data Bases**

INPUT

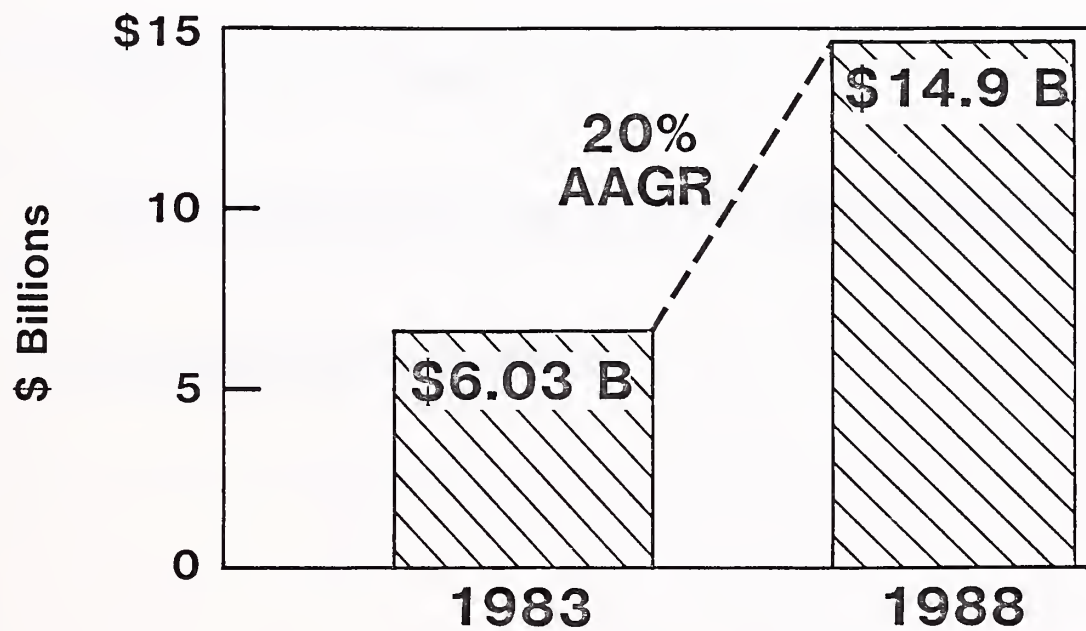
TELECOMMUNICATIONS TRENDS

- Rapid Growth
 - Private Networks
 - LANs
- High-Speed Voice-Data Integration



INPUT

BUSINESS COMMUNICATIONS GROWTH 1983-1988



INPUT

COMMUNICATIONS DEREGULATION – OPPORTUNITIES

- **More Equipment Choices**
- **Technological Advances Encouraged**
- **Competitive Pricing**

INPUT

COMMUNICATIONS DEREGULATION - RISKS

- **Procurement Process More Complex, Costlier**
- **Service and Maintenance More Diffused**
- **Need for Costlier, Qualified Personnel**
- **Standards and Compatibility Problems**
- **Unproven Technologies → Expensive Mistakes**

INPUT

LAN VERSUS CBX DECISION CRITERIA

Select LAN

- Mainframe to Mainframe Links**
- Extensive Data Base Updates**
- High Speeds Needed**
- Protected Investment in PBX**
- Redundant Networks Desired**

INPUT

LAN VERSUS CBX DECISION CRITERIA

- **Select CBX**
 - **Low Speed Okay**
 - **Sporadic Terminal/PC Access to Mainframe**
 - **Physical Constraints on New Cable Installation**
 - **Frequent Moves**
 - **Integrated Voice/Data Features Desirable**

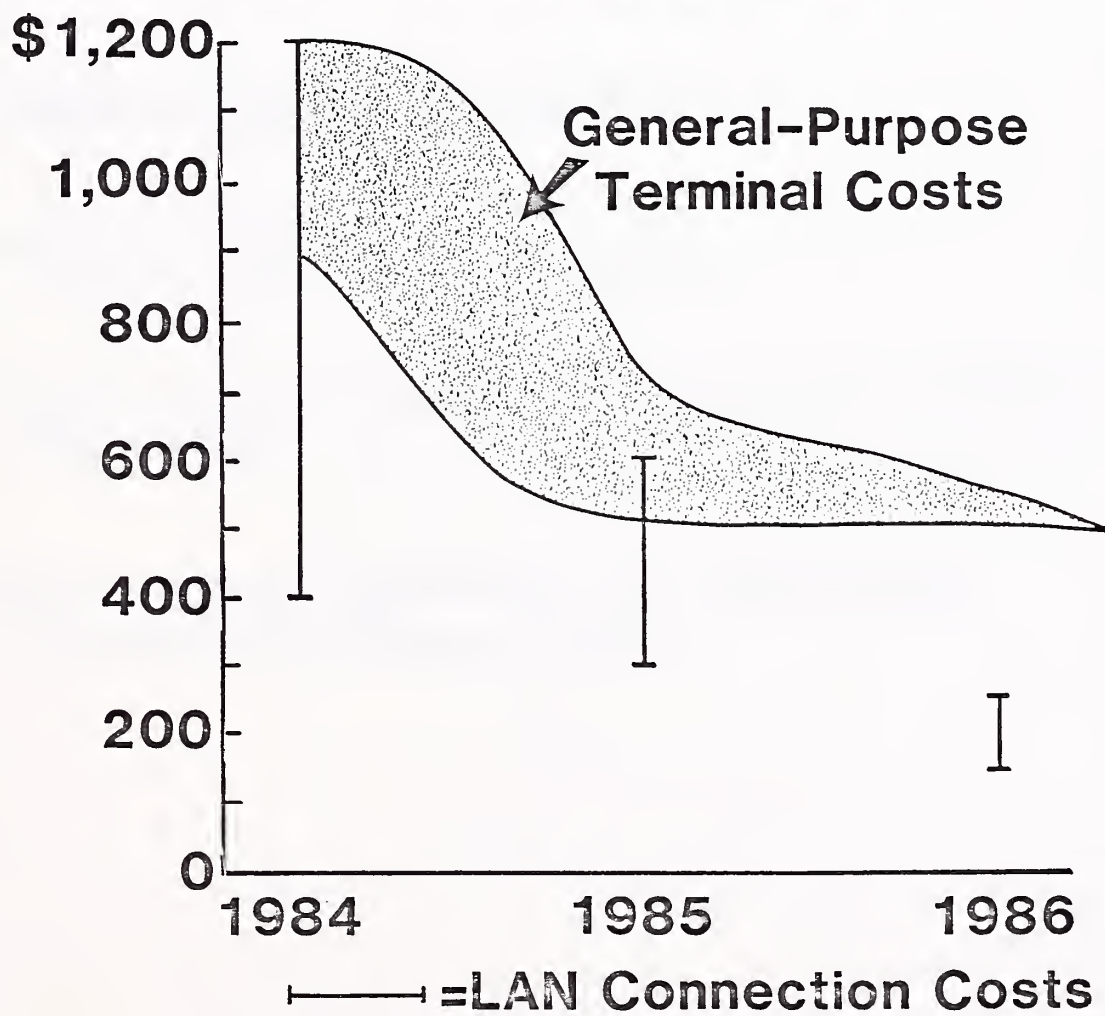
INPUT

ALTERNATIVES FOR INTEGRATING VOICE AND DATA

- **Upgrade PBX**
- **Third-Generation CBX**
- **LAN**
- **Fourth-Generation CBX
with Integrated LAN**

INPUT

STEEP DECLINES COMING FOR LAN AND TERMINAL COSTS

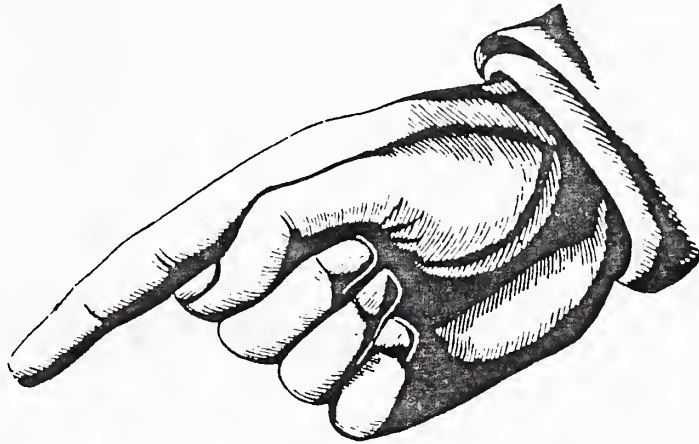


INPUT

TELECOMMUNICATION IMPLICATIONS

- **Wider Range of Tariffs**
- **Wider Range of Vendors**
- **Increased Corporate Network Design Flexibility**
- **New Opportunities for Reducing Communications Costs**

INPUT



CONCLUSIONS AND RECOMMENDATIONS

INPUT

THE LATE 1980s

- **Personal Information Centers**
- **Connectivity Between End User and Corporate Data Base**
- **Resurrection of DDP**
- **Advent of Individualized Systems**

INPUT

1990s

- **Subscription Software**
- **Turnkey Solutions**
- **Paperless Office**
- **Expert Systems**

INPUT

CONCLUSION

- **You Need Involvement**
 - **Corporate and Distributed Management**
 - **IS and Line**
 - **Staff**
 - **Outsiders**

INPUT

CONCLUSION

- **You Can't Plan in a Vacuum**
- **You Need a Systematic Approach**

INPUT

RECOMMENDATIONS

- **Establish End-User Computing Support Function**
- **Distribute Processing**
- **Market IS Services**
- **Go with Individualized Systems**

INPUT

**The Firm's Competitive
Health Requires Better
Information Systems**

Prepare Now!!

INPUT

BE PREPARED FOR THE 1990s

Get into the Service Business

INPUT

